

DOCUMENT RESUME

ED 290 530

PS 016 765

AUTHOR Saraswathi, T. S.; Dutta, Ranjana
TITLE Current Trends in Developmental Psychology: A Life Span Perspective.
PUB DATE 87
NOTE 74p.
PUB TYPE Information Analyses (070)
EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Child Development; *Developmental Psychology; Foreign Countries; *Individual Development; Research Methodology; Research Needs; *Socialization
IDENTIFIERS *India; Life Span Development; *Research Trends; *Social Policy

ABSTRACT

Third in a series, this review examines progress made in research in developmental psychology, primarily in India, between 1976 and 1984. Focusing on physical, motor, and mental development, Section I discusses physical development and growth norms as well as factors influencing physical development. Section II, centering on cognitive, perceptual, and language development, discusses concept acquisition, the development of intelligence, creativity, perceptual development, language development, and learning and memory. Socialization and personality development are discussed in Section III, with particular attention given to the relation between child-rearing practices and selected personality variables, social motives, and problems of adjustment. Section IV covers child development research and social policy in terms of demographic, planning, and policy concerns, and programs and welfare services. Section V discusses conceptual and methodological issues. Section VI focuses on future directions for the discipline of developmental psychology. Included is a list of over 300 references to papers authored predominantly by Indian researchers. (RH)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

ED290530

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☒ This document has been reproduced as
received from the person or organization
originating it.

☐ Minor changes have been made to improve
reproduction quality.

• Points of view or opinions stated in this docu-
ment do not necessarily represent official
OERI position or policy.

CURRENT TRENDS IN DEVELOPMENTAL PSYCHOLOGY:
A LIFE SPAN PERSPECTIVE

T. S. SARASWATHI & RANJANA DUTTA

DEPARTMENT OF CHILD DEVELOPMENT

M. S. UNIVERSITY OF BARODA

BARODA

(Draft of paper in press)

(To appear in J. Pandey (Ed.). (1987). A Survey of Researches in Psychology
in India 1975-1985. Funded by The Indian Council of Social Science Research)

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Ranjana Dutta

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

PS 016765

CONTENTS

INTRODUCTION

Scope and Plan of Chapter

I. PHYSICAL, MOTOR, AND MENTAL DEVELOPMENT

Physical Development and Growth Norms

Factors Influencing Physical Development

II. COGNITIVE, PERCEPTUAL, AND LANGUAGE DEVELOPMENT

Acquisition of Concepts

Development of Intelligence

Creativity

Perceptual Development

Language Development

Learning and Memory

Factors Influencing Cognitive, Perceptual and Language Development:
Focus on Social Disadvantage

III. SOCIALIZATION AND PERSONALITY DEVELOPMENT

Child Rearing Practices

Relation Between Child-Rearing Practices and Selected Personality
Variables

Social Motives

Problems of Adjustment

IV. CHILD DEVELOPMENT RESEARCH AND SOCIAL POLICY

Demographic, Planning, and Policy Concerns

Programs and Welfare Services

V. CONCEPTUAL AND METHODOLOGICAL ISSUES

VI. FUTURE DIRECTIONS

CONCLUDING COMMENTS

ABSTRACT

The present overview review examines the progress made in researches in developmental psychology since the publication of the second ICSSR survey in 1976. The contents of this chapter are diverse reflecting the diversity of research in this field. The available literature has been reviewed under five broad topical headings. The first three sections deal with the substantive content in the areas of (1) Physical, Motor and Mental Development; (2) Cognitive, Perceptual, and Language Development, and (3) Socialization and Personality Development. Implications for social policy especially as related to work with children who have special needs and those in disadvantaged settings are focused upon in one section. Yet another section deals with the conceptual issues and methodological problems that are prevalent across various subject matter areas within the discipline.

BIODATA

Footnote 1

The senior author is currently an Associate Professor in Child Development at the M. S. University of Baroda. She obtained her doctoral degree from Iowa State University, USA as a Ford Foundation Fellow in 1972. Her contributions have been mainly in the area of developmental changes in memory, development of moral judgement, socialization of children among the rural and urban poor, and issues related to status of women. Dr. Saraswathi has shared her work in a number of national and international conferences and recently spent six months as a Visiting Fulbright Scholar at Cornell University, Ithaca, USA.

Ms. Ranjana Dutta is a Research Associate at the Department of Child Development at the M. S. University of Baroda. Throughout her higher studies she was a recipient of the NCERT fellowship. Her master's thesis examined the socialization practices among the rural poor.

Footnote 2

Author's address: Department of Child Development, Faculty of Home Science, M. S. University, Baroda, Gujarat, INDIA 390002.

Footnote 3

The authors wish to express their appreciation to Dr. S. Anandalakshmy, Director, Lady Irwin College, Professor R. Murlidharan, Child Study Unit, NCERT, and Dr. V. Mistry, Department of Child Development, M. S. University of Baroda for their careful reading and comments on the earlier drafts.

INTRODUCTION

Scope and Plan of Chapter

The present review is based almost entirely upon published work in the field of developmental psychology and allied disciplines during the period 1976-1984. Unpublished reports have been included only when they dealt with an otherwise little researched area or made an exceptional contribution. Less than 50% of the literature surveyed has been included in the review, the criteria for screening being focused on developmental change (or choice of age of subjects as a main variable), methodological rigor and conceptual clarity.

The contents of the chapter are diverse reflecting the diversity and the interdisciplinary nature of research in the field. Some topics such as creativity and intelligence have been given brief coverage, as separate chapters have been devoted to them in this volume. Yet, a certain degree of overlap among the sections of the present review (as among the chapters in this volume) has been inevitable no matter what the classification system used. To the extent possible, studies have been categorized in the areas of their major concern with cross-reference whenever pertinent.

As the chapter contents indicate, research in developmental psychology during the last decade has encompassed practically all aspects of development: (1) Physical, Motor and Mental; (2) Cognitive, Perceptual and Language; and (3) Socialization and Personality. Researches related to these three major aspects of development have been reviewed in the first three sections, in terms of their contribution to understanding the process of development and factors influencing the same. The fourth section is devoted to implications for social policy that can be derived from child development research. Some of the conceptual and methodological problems that plague the field are examined briefly in the fifth section, followed by indications for future directions in the sixth and concluding section of the chapter.

I. PHYSICAL, MOTOR, AND MENTAL DEVELOPMENT

Contributions to the study of physical development come from child development as well as the related disciplines of pediatrics and nutrition. In recent years malnutrition and its consequences for physical, motor, and mental development has considerably engaged the attention of researchers in the field.

Physical Development and Growth Norms

Normative studies on physical development have covered a wide range of subjects from pre-school years (H. D. Rao, Satyanarayana, & Gowrinath, 1976) to school and college age subjects (H. D. Rao & Gowrinath, 1977; Satyavathi, Agarwal, & Agarwal, 1981a, 1981b). The salient findings that emerge are: the height measurements of well-to-do urban pre-school children are comparable with that of American and British pre-school children, and are higher than rural Indian children of the same age and sex (H. D. Rao, Satyanarayana & Gowrinath, 1976), height data are similar for rural and urban boys; the rural girls are significantly taller than their urban counterparts after the 10th year of age; and the trunk-waist girth is higher for urban boys at all age levels (Satyavathi et al., 1981a, 1981b): the 50th percentile value for height and weight of boys from the upper-middle and upper class correspond with the 50th percentile of American and British cohorts till age 10 years and then decline (H. D. Rao & Gowrinath, 1977).

Longitudinal follow-up of infants from birth to 6 years (S. K. Bhargava, Kamari, Choudhry, Ghosh, Bhutani, & Bhargava, 1983a, 1983b) indicates that preterm infants with birth weight appropriate for gestational age are comparable at 6 years to normal birth weight controls in height and head circumference but continue to be lighter in weight, whereas infants of extremely low birth weight (1500 g or less) continue to be significantly lighter and shorter, and had smaller head circumference.

As part of a series of publications based on the Baroda longitudinal study on motor and mental development (Phatak, 1969), a pictorial monograph illustrating the milestones of development has been brought out (Phatak, 1977). This monograph, as well as another by Ghai (1978) could serve as useful resource material for pediatricians, nutritionists, and community health workers, both in training and assessment. The book "Feeding and care of infants and young children" by Ghosh (1976) provides useful guidelines related to breast feeding, weaning-foods and nutrition, malnutrition, infections and immunization, physical growth norms, and simple growth assessment techniques.

Factors Influencing Physical Development

Social class

Socio-economic status has been used as a major independent variable in a number of studies on physical development (Bhandari & Ghosh, 1980; H. D. Rao, 1977; Siddamma, 1979; Visweswara, Devi, Reddy, & Narayanan, 1978; Pereira et

al., 1983). These studies cover the age range from birth to maturity and indicate that stature is influenced favorably by increase in income, mother's education, and professional or occupational status. Other factors confounded with socio-economic status are parity, sex, and morbidity. The causes of SES differentials are multiple and complex and include availability of nutrition, number of children, environmental sanitation, and other related factors.

Malnutrition

The attention that malnutrition and its consequences have commanded the world over (see Pollitt, 1980) is also reflected in child development research in our country.

Ghai (1975) presents evidence indicating a definite and significant lag in the inter-sensory integration function of malnourished rural children of ages 4 1/2 to 6 1/2 years. Results presented by M. V. Singh, Anand, Gupta, and Dhingra (1976) indicate that in all SES (Socio Economic Strata) normally nourished school age children (5 to 9 years) had higher IQ than malnourished children. Even ten years later children who suffered Kwashiorkor and had received hospital treatment indicated a lag in mental development (U. Parikh, 1975). The children were compared with same age normal children from similar socio-economic and environmental background. A similar trend has been noted by R. Sharma (1979) in the Baroda babies followed up a decade later. Boys showed greater vulnerability than girls.

The cognitive competence of 512 infants from 6 to 25 months and from three social classes was assessed by Anandalakshmy (1982a) using a modified Bayley Scale of Infant Development. For the total group, a clear positive relationship was present between nutritional status and Psychomotor Development Index (PDI). No such relationship was evident between mental development (MDI) and nutritional status. An age-wise analysis of the data indicated a decline in MDI as level of malnutrition increased but no consistent pattern emerged. Mental development was more clearly related to maternal affiliation and cognitive stimulation. Case study data of infants followed up over nine months indicates that cognitive stimulation and play provided by the mother and other caretakers facilitate recovery. As emphasized by Ricciuti (1982) the buffering influences in family functioning which seem to make some families more or less vulnerable to the occurrence of severe malnutrition is a crucial area of inquiry.

Synthesizing the research evidence in this area, Jesudasan, Ambujadevi, and Bhogle (1979) utilize the technique of path analysis to empirically estimate a causal model between nutritional status and motor and mental development. Their findings may be summarized as follows: higher the socio-economic status, lower the level of nutritional deficiency; higher the age and extent of nutritional deficiency of the mother, higher the nutritional deficiency of the child, lower the mental and motor development, the relationship being more pronounced in the higher age groups than in the lower age groups; and lastly, children from nuclear families on an average, exhibit lower levels of mental and motor development. The last finding opens up a promising area of research related to child care support systems. The authors discuss the results in terms of presence of more adult care takers in joint families who would feed even the fussy child, consequently lowering the chances of nutritional deficiency.

On the methodological front of the review by Wig, Mehta, and Verma (1981) is of interest. They review the shortcomings of previous studies on malnutrition and mental development, discuss the methodological problems involved in assessment as well as in statistical analysis and longitudinal follow-up of subjects, and offer pertinent suggestions for future work. In this context attention must be drawn to two assessment measures developed and tested in recent years namely, the Mental Abilities Test developed by Natesan and Devades (1981), and the Developmental Screening Test standardized by S. K. Verma, Pershad, and Menon (1979). High reliability and validity scores have been reported for the latter.

The effect of malnutrition on social and emotional development has received considerably less attention when compared to that on mental development (Bedi, 1981; Bhattacharyya, 1981; P. K. Chatterjee & Bhattacharyya, 1979; Chattopadhyay & Bhattacharyya, 1981a, 1981b; Kothari, 1981). Malnourished children were characterized as being less exploratory, less attentive, fearful, socially withdrawn, less active, and had low energy levels as compared to normal infants.

In sum, an examination of the empirical literature in the area of physical development and factors associated with the same reveal a vast data pool. A systematic integration of the available information on the various physical growth indices from birth to maturity is imperative. Such an effort

would not only lessen repetitive attempts and facilitate future research, but also provide a sound data base and direction for action programmes.

II. COGNITIVE, PERCEPTUAL, AND LANGUAGE DEVELOPMENT

A broad range of studies dealing with the various stages of information processing have been reviewed in this section. These include studies related to Piagetian ideas of cognitive development, intelligence as assessed by psychometric measures, some aspects of creativity, perceptual development, language development, learning and memory.

Acquisition of Concepts

Concept acquisition has been studied mainly within the Piagetian framework. Results reveal that subjects' conservation scores on length, mass, weight, and volume generally increased over the age period of 4 to 8 years with discernable improvement beyond 5 1/2 years of age, scores were higher for mass than for weight and volume (S. N. Rao, 1976b, 1976c): concept of time develops around age 10 (R. G. Chatterjea, 1978): and concept of speed around nine (Bevli, 1977 cited in D. Sinha, 1982a); training through modeling of operational rule of reversibility, identity, and compensation is effective in the development of conservation among 5 to 7 year old non-conservers (Babu & Das, in press); verbal training is more effective than non-verbal training (S. N. Rao, 1976c); and is influenced by ability level (S. N. Rao, 1976a) and role-taking ability (Behl & Gash, 1980).

Deviating from the standard techniques used in the Piagetian studies of cognitive development, Dash and Dash (1983) utilize an innovative adaptation of the Pearson and Maddi Similies Preference Technique varying the similies from concrete to abstract. The observed shift in preference of children (grade 4 to 7) of similies from concrete to abstract was attributed to the shift from a period of concrete operations to a period of formal operations.

Cross cultural work in this area compares the performance of Indian children with that of Swiss, British, and American children. Bevli (1977, cited in D. Sinha, 1982a) studied the genesis of the child's idea of time and the development of concept of speed and motion in 6 and 12 year old Indian children from different environments. It was observed that development of cognitive operations involving the concept of speed followed the same pattern as those of the Genevan children though differences were found in favour of the Swiss children in ultimate level reached and speed of development. Social advantages emanating from schooling, urbanization, and modernization

were viewed as having a facilitative effect. S. P. Sharma (1976) found that Indian primary school children attain conservation concepts earlier than British Children, the differences being explained as, at least partly due to, tester effect.

In the only study identified on cognitive development of infants, Kopp, Khoka, and Sigman (1977) used part of the Casati-Lezine Scale to assess 81 Indian and 71 American infants, 7-12 months of age, and examined the role of care-giver behavior on infants' cognitive performance. Results indicate that in the exploration task a greater percentage of Indian infants at 11 to 12 months reached stage 5 than did American infants, whereas on the other three tasks (hidden object; use of intermediaries, and object and support) American infants were at more advanced stages at all ages. The authors suggest that the observed differences could be due to differences in maternal behavior in the test situation and also a function of care-giving practices.

A model for cross-cultural research in conservation has been proposed by A. Mohanty and Stewin (1976). Based on a review of previous researches, the model identifies cultural, ecological, and educational variables in relation to magical thinking, perceptual flexibility, and logical reasoning as crucial in development of children's judgements and explanations in conservation tasks. Some variations to the standard testing procedure, namely, screening and self transformations, have been suggested to test the hypotheses derived from the model and also as training techniques.

Development of Intelligence

While studies on cognitive development have essentially utilized Piagetian tasks, investigations related to ability testing in children have predominantly used psychometric measures. Findings pertaining to developmental trends in early childhood indicate that the Developmental Quotient (DQ) of infants in the first 30 months of life is characterized by stability in mean DQ with a high degree of individual variation (Bhakoo, Kaur, Narang, & Verma, 1977). As the authors point out, at least some of the variation may be due to methodological problems in scoring. Further, no substantial change in the nature and composition of general intelligence as measured by Binet-Kamat Test of Intelligence has been noted during the age period 4 to 7 years (Chattopadhyay & Bhattacharya, 1981b).

Cross cultural comparisons have yielded some data of interest. Cox, Bryand, and Agnihotri (1982) found no significant differences in performance

of children born in U.K. of British or Indian origin on a battery of abilities tests. In general, performance of children in India was lower, but was poorest among recent immigrants in U.K. The authors discuss the findings as suggesting that it is the problems associated with recent immigration that lead to poor test performance. Further analyses of the reasons for differences in the test performance of Western and Indian children is provided by Pershad, Verma, and Randhawa (1979), and S. K. Verma, Pershad, and Randhawa (1980) who suggest that changes in access to Western forms of education as well as differences in test administration may account for the observed differences.

Creativity

The area of creativity appears to be one of the most popular areas of investigation. Jarial (1980) classified Indian studies on creativity as addressing four topics of investigation, namely, (a) the concept of creativity; (b) measurement of creative potential; (c) relation between creativity and other variables; and (d) the development of creative potential. Since the topic of creativity is dealt with in a comprehensive manner in a separate chapter in this volume, only studies that have direct developmental implications will be reviewed here.

Evidence regarding sex differences in creativity is equivocal, some indicating superiority of females and others of males. Girls appear to excel in word association, ideational and expressional fluency, flexibility and originality, and autonomy in thinking (R. P. Singh, 1978). Superior performance of males has been reported on measures of verbal fluency, verbal flexibility, figural originality, and figural elaboration (Tara, 1981), on Torrance Test of Creative Thinking (Dharmangadan, 1981) and other tests of creativity (Rawat & Agarwal, 1977). A comprehensive review of studies in this area could indicate whether girls have a distinct edge over boys in creative potential with semantic content while boys excel in the symbolic and figural content, and whether such differences prevail across cultures.

A number of studies indicate a significant positive correlation between socio-economic status and creativity (Ahmed, 1980; Ahmed & Joshi, 1978, Vijayalakshmi, 1980). Evidence regarding the nature of relationship between creativity and intelligence is inconclusive (Jarial, 1980; Jarial & Sharma, 1980), some studies indicating no relationship, some a positive linear relationship, and some a curvilinear relationship depending upon the types of

tests used and the nature of the sample studied. Asha (1980a) reports a significant positive relation between creativity and academic achievement.

Differences in selected personality traits among high and low creative individuals has been another topic of investigation. The major findings may be summarized as follows: (a) high-creative subjects indicated that they were more outgoing, cooperative, attentive to others, quick to learn, emotionally mature and spontaneous; low-creative subjects on the other hand indicated that they were more reserved, rigid, slow to learn, unstable, and shy (S. Agarwal & Bohra, 1982); (b) high creative high school studies showed a better sense of humor (L. K. Verma, 1981), were emotionally more secure (Rastogi & Nathawat, 1982), and showed better general adjustment (R. P. Singh, 1981a, 1981b) than students low on creativity; (c) creativity was related to extroversion in males only (Chanda & Sen, 1982) and not related to health adjustment (Asha, 1980b).

In the single cross-cultural study identified in this area, Raina, Kumar, and Raina (1980) compared the opinions of 165 Indian fathers concerning characteristics to be encouraged or discouraged in children, with the opinions of American parents and experts on creativity. Indian and American parents showed close agreement in their rank ordering of the characteristics, but responses of both parent groups correlated poorly with the ranking of the experts. Qualities valued as essential in an ideal child included: healthy, affectionate, obedient, adventurous, altruistic, sincere, self-confident, considerate of others, and courageous in convictions. Experts stressed qualities such as, curious, independent in thinking and judgement, and unwilling to accept anything on mere "say-so."

Perceptual Development

Of the four studies dealing with perceptual development that could be identified, three are cross cultural studies. Abravanel (1977) using 52 American and 35 Indian children, 3-4 years of age showed that even 3-year olds used the Euclidean property of parallelism as a source of information for matching, and that the effect was even stronger among the 4-year olds. This is noteworthy considering that conservation of horizontality of liquid in a tilted container is infrequently observed in children under 10 years of age and is often missing even in adults. Abravanel speculates on the possible difference that exists between the process of figural construction on the one hand and the organization of remote parallels, as between the

surface line of the liquid and other horizontals, such as table tops or floors, in the visual field. In all the perceptual tasks the 4-year old American children performed better than 4-year old Indian children though the latter scored distinctly higher than 3-year old American children.

Fisher (1978) presents data suggesting that visually perceived depth may activate the young child's enactive system dominant during the pre-operational period and serve to increase accuracy of letter discrimination. Letter discrimination as a function of culture, orthography and dimensionality of letters was examined by Fisher in 46, and 80, 4-year olds from USA and India respectively. Between group comparisons indicated that American children, younger children, and boys made more errors, and both groups made more errors in Kannada than in English orthographic tasks.

Absence of significant cross-cultural differences in perceptual processes are also reported in a study on utilization of pictorial information in a classroom setting on samples from Ghana, India, Kenya, Scotland, and Zambia by Jahoda, Cheyne, Deregowski, Sinha, and Collingbown (1976, cited in D. Sinha, 1979). The results indicated that in all the countries, the main effect of presentation was significant, with pictorial-verbal groups learning more than either only pictorial or only verbal groups.

Lastly, the decrease in the degree of Muller-Lyer and Poggendorff-Ponzo illusions with increasing age (6 to 11 years) is reported by Bharathi and Ramamurthy (1977), and Ramamurthy and Bharathi (1979), respectively.

Language Development

Studies in the area of language development and psycholinguistic abilities are concerned mainly with the effect of bilingualism and socio-economic disadvantage. In contrast with the negative effect of bilingualism reported by researchers in USA the studies reported herein indicate favourable influences.

Southworth (1980) presents interesting quantitative and qualitative data on Indian bilingualism with implications for education and linguistics. The study questions the implicit assumption among western students of bilingualism that monolingualism is the normal condition for a well adjusted human being, and that any deviation from this norm implies an added burden. Results of his study of 1,300 bilingual and monolingual Malayalee school children indicate that bilinguals do as well as or slightly better than

monolinguals in academic performance, and that there is no pattern of class differences in the performance of bilingual and monolingual subjects.

Data supportive of Southworth's thesis on bilingualism is found in a series of studies by Mohanty and his associates at Utkal University (Babu & Mohanty, 1982; A. K. Mohanty, 1982a, 1982b; A. K. Mohanty & Babu, in press; Sahu & Sahu, 1982). In their studies of bilingualism and metalinguistic ability with Kond tribals in Orissa, bilinguals scored significantly better than monolinguals in detection of syntactic ambiguity, evaluation of contradictions and tautologies, symbol substitution as well as on tests of simultaneous and successive information processing. Mohanty concludes that bilingualism furthers the cognitive and linguistic development by increasing cognitive flexibility and promoting a more objective and analytical orientation to language.

Chervela (1981) presents longitudinal data on the acquisition of consonant clusters in 4 Telugu, 1- to 3-year old children. Cross-sectional data at six-monthly intervals from 1.6 to 3.0 years are also presented. Data was obtained both through controlled elicitation and in free conversation. Results indicate that reduction, substitution, and assimilation played major roles in cluster acquisition. In this context the publication of the longitudinal study on language development of children aged 2 1/2 - 3 years based on the NCERT Developmental Norms Project is noteworthy (Bevli, 1983).

Learning and Memory

Of the three studies identified in the area of learning in children one deals with verbal conditioning (Mohan & Dharmani, 1976) and two others with reversal and non-reversal shift (R. Srivastava, 1976, 1977a). Both intelligence and personality traits appear to influence verbal conditioning. Dull children (11-14 years of age) conditioned best, followed by average and bright children; and introverts conditioned better than extroverts (Mohan & Dharmani, 1976). Reversal shift appeared easier than non-reversal shift for both 10-16 year old school children and 18-21 year old college students (R. Srivastava, 1977a). Further subjects tended to use fewer trials as the amount of preliminary training trials increased for reversal shift learning. R. Srivastava (1976), tested the validity of the conclusion that the stage of development at which there is transition from single-unit stimulus-response associations to mediated associations, depends largely on the learning capacity of the individual. While the slow learners among his 9-11 year old

subjects took more trials to reach criterion, results indicate that both groups (slow and fast learners) used mediational mechanism.

As in the area of learning, developmental studies in memory are also very sparse. The focus here has been on age changes in memory span (Nayar & Sen, 1981; A. Pandey, 1976; Pershad, 1979; Pershad & Wig, 1977; Saraswathi, 1976); strategies used in coding and recall (Kool & Agrawal, 1981; Saraswathi, 1977); and relation between memory and experiential deprivation (G. Misra & Shukla, 1979).

Age changes in memory span are characterized by a shift from 3 to 4 digits between 3 1/2 and 4 years (Saraswathi, 1976) and from 3.6 to 4.8 digits between ages 6 to 11 years (Nayar & Sen, 1981); and a decline in retentive recall of subjects 40-70 years of age (Pershad, 1979). Increase in memory capacity during childhood is discussed by Saraswathi (1976) as indicating three possibilities: (a) an increase in short-term memory capacity; (b) change with age in the ability to avoid distracting stimuli and focus attention, and (c) change in the strategies of coding and retrieval. Developmental changes in memory strategies indicate: (a) production and mediation deficiency are present in young children (6-7 year). Young children are unable to use spontaneous categorization to aid coding and recall and when provided with cues improve their performance though not to the same extent as that of the older children (12-13 years) (Saraswathi, 1977); (b) words are held in short term memory by virtue of the semantic and syntactic links between them and these links are age dependent (Kool & Agrawal, 1981).

Factors Influencing Cognitive, Perceptual, and Language Development: Focus on Social Disadvantage

The role of socio-cultural disadvantage in influencing cognitive, perceptual, and language development has become a fertile area of investigation in recent years. In general the studies report facilitating influence of caste, social class, and schooling for those at the upper end of the continuum and the negative influence on the disadvantaged (Ghuman, 1978; Majeed & Ghosh, 1981; G. Misra, 1982, 1983; G. Misra & Shahi, 1977; Murlidharan, Malani, & Bevli, 1984; Rath & Patnaik, 1979).

The adverse consequences of social disadvantage on practically all aspects of perceptual, cognitive, and language development have been documented. These include verbal competence of primary school children in

all four verbal sub-tests of Bhatt's adaptation of WISC (Sahu, 1979, 1981); Level II abilities which require elaboration and transformation of information input (Jachuk, 1982a, 1982b); category clustering in free recall (Jachuk & Das, 1982); Reven's Progressive Matrices Test and short term memory scores (B. Mohanty, 1980a, 1980b); and performance on perceptual tasks of varying levels of complexity (R. C. Misra, 1976 cited in D. Sinha, 1979; D. Sinha, 1977c).

Sahu and her associates (Sahu & Devi, 1983; Sahu & Jena, in press; Sahu & Sahu, 1982) have attempted to identify specific factors associated with socio-cultural disadvantage that may be responsible for lower psycholinguistic competence. Salient findings of their studies are: (a) Among children of grades 2, 3, and 5 with intelligence partialled out, the advantaged children perform consistently better than the disadvantaged, the cumulative deficit becoming more marked as age progresses. (b) Among pre-school children, the quality and quantity of home stimulation affected the advantaged and disadvantaged in different ways. For the advantaged group of subjects stimulation through toys, games, and reading materials contributed the highest variance, whereas for disadvantaged group of subjects physical environment (as assessed through Caldwell's Home Inventory) contributed the highest variance to their psycholinguistic abilities. (c) Both tribal unilingual and bilingual second grades performed as well as and in some cases even better than the non-tribal unilingual disadvantaged on tests of linguistic proficiency and psycholinguistic competence. The authors conclude that the superior performance of tribals in this case may be due to the operation of three factors: acculturation of the tribal unilingual group; provision of good schooling facilities for the tribal bilingual group; and uncontrolled selection in sampling the tribal child population.

Data on some of the factors related to environmental stimulation are presented in a few studies. For example, conservation and related classificatory skills are influenced by rural-urban residence (Banerji & Jain, 1982); and sensory stimulation (Jain & Iyengar, 1976; Iyengar & Jain, 1979). Children who had exposure to comics and other pictorial materials performed more competently on perceptual tasks such as pictorial interpretation and sequential perception (R. C. Misra & Gupta, 1978; A. K. Singh, 1981b). Training has a facilitating influence on the performance of both non-disadvantaged (A. K. Mohanty & Choudhry, 1981; S. N. Rao, 1976b) and

disadvantaged populations (Rath & Patnaik, 1979), with the disadvantaged children benefitting even more from the training than their advantaged counterparts.

In this context the findings and discussion of a study by D. Sinha (1977c) are of interest. Comparison of performance of 240 school age children (4 to 10 years) on simple to complex perceptual tasks revealed that caste status was not so potent an influence as the quality of schooling in the acquisition of perceptual skills. Sinha explains his findings as indicating the broomstick effect in the superior schools wherein the gap between the advantaged and disadvantaged widens with advancing grades. In the ordinary schools however, the differences in favour of the non-scheduled caste groups in the lower grades tended to level off. This interpretation received support from the study by R. C. Mishra and Gupta (1983) that the quality of schooling exercises a powerful negative influence on pictorial comprehension.

A number of excellent reviews have carefully examined the empirical data available on socio-cultural disadvantage and perceptual, cognitive, and psycho-motor skills (Sandeep & Pushpa, 1981; D. Sinha, 1979), and take a critical look at the conceptualization of deprivation, its measurement and theoretical interpretations (G. Misra, 1982, 1983). The empirical work in this area (See D. Sinha, Tripathi, & Misra, 1982), the critical examination of the methodological problems associated with the study of the constructs deprivation and social class (B. B. Chatterjee, 1982; L. B. Tripathi, 1982), and the construction and standardization of the tool to measure prolonged deprivation (G. Misra & Tripathi, 1977, 1978), have made useful contributions to this socially significant area of study and provide clear direction to future studies on the consequences of deprivation.

III. SOCIALIZATION AND PERSONALITY DEVELOPMENT

Child Rearing Practices

The study of child rearing practices and its consequences to personality development has continued to be an area of both theoretical and research interest. Research has focused on social class and urban rural differences in child rearing, and on the consequences of some child rearing practices for selected personality variables. Theorizing has remained essentially within the psychoanalytic framework.

Examination of the urban-rural differences in child rearing practices indicate that rural mothers foster dependency (Seth, Saksena, & Srivastava, 1978); interact more with girls than with boys and opine that girls need more discipline and instruction (Dutta, 1983; Gore, 1983).

Based on extensive interview data from 300 rural and urban mothers, Mathew (1977) reports that both urban and rural children emphasized the instrumental role of the father but the socio-emotional role of both parents. Parents on their part considered themselves as responsible for providing good education to their children, finding suitable marriage partners for them, and for making financial provision for children's future.

Seymour (1976) presents interesting data on social class differences in child rearing based on timed observation of mother/mother surrogate and child interaction over a period of 18 months. The consequences to child behavior of the observed child care practices included: extended physical dependence in the higher compared to the lower social class; assignment of regular duties and responsibilities, expectation of self reliance, early independence training in self reliance, responsibility associated with intra-family responsibility and interdependence with others in the lower class. The study exemplifies good research design, choice of sound techniques, careful analysis and interpretations that aim at ecological validity.

Influence of mother's education and employment status on child rearing practices emerges in the following findings. Educated mothers encouraged vocalization in their children, were stricter, and suppressed children's aggression (Seth & Saksena, 1978); permitted more independence and indicated greater use of systematic reward and punishment (Rai, 1979); and interacted more with their children in both urban and rural areas (M. B. Singh & Kaur, 1981). Working mothers from the upper middle class families showed more approval of comradeship and sharing with their children than did non-working mothers (Saksena, Agrawal, & Singh, 1977).

Two studies (Minturn, Boyd, & Kapoor, 1978; Ryback, Sanders, Lorentz, & Koestenblatt, 1980) examine the impact of social change and cross-cultural differences in child rearing practices, respectively. Ryback et al., examined child rearing aspects of psychological security, feeding and weaning, toilet training, and socialization. There were significant differences across cultures. For example, Ethiopian mothers, followed by Indian mothers were seen as most likely to feed a child on a schedule

convenient to the mother and to wean by sudden withdrawal. The major limitation qualifying Ryback et al.'s report of comparisons of child rearing practices in six cultures (Ethiopia, China, Thailand, Israel, India, and USA), is that the data represent retrospective responses of college students only. Minturn et al. followed-up after 20 years, mothers and families first interviewed in 1955. The more active involvement of the younger generation of mothers in rearing their children is interpreted by the authors as the consequence of increased prosperity and educational level and consequent increase in power-status of daughters-in-law.

Some interesting work has been done in relation to how children are valued and for what reasons, with special reference to the value attached to the male child in India. Y. Singh, Bhargava, and Kumar (1981) examine the conceptual framework surrounding the question of why human beings want children and the biological, cultural, political, and economic motivations associated with the same. Their review indicates that residence, literacy, income, occupation, and age (or generation) of the couple appear to be factors related to determining small family size (having three or less children). Paliwal (1979) found security in old age to be the major reason why couples want children. Interesting data from rural Maharashtra indicating that aged parents in agricultural communities seldom live long enough to be economically and physically dependent on their sons, questions this assumption of male progeny as old age security (Vlassoff, 1978).

Two questions "why" and "how," related to the (obsessive) desire to bear male children are examined by Stork (1980) in her excellent theoretical analysis based on religious books and traditional medical texts. Answer to the first question "why" is based on the analyses of religious motives, data on psychological and economic factors, and on the concept of dharma. Response to the second question "how" is derived from analyses of traditional medical texts describing prescriptions for determination of sex and domestic rituals designed to increase the probability of having sons, as well as to insure his psychological and physical well being after birth. Preference for the male progeny comes through in a number of aspects of child rearing (see section on sex role development) including the way mothers regulated the behavior of their children (N. Sharma, 1981), and immunization practices (D. N. Pandey, Agnihotri, & Srivastava, 1979).

It appears appropriate to conclude this section with citation of an extensive review by Khalakdina (1979a) on early child care in India, where she presents a historical overview and examines prevailing conceptions regarding the upbringing of the child. Research related to the child from various disciplines including social anthropology as well as on intervention programs for child and family welfare are presented. Training of child care workers is discussed and specific systems of child care programs are described, integrating existing empirical data with relevant policy implications.

Relation Between Child Rearing Practices and Selected Personality Variables

Hypotheses testing studies of the consequences of various child rearing practices to personality development are few in comparison with descriptive studies. The major findings indicate that firm and consistent discipline, both at home and in school seem to be responsible for promoting mature behavior patterns, and cognitive and social competence in school age children (P. Sharma, Saraswathi, & Gir, 1980, 1981). A positive correlation is present between emotional and social adjustment scores of female subjects and their perception of their mothers, and to a lesser extent of their fathers as nurturant and affectionate (P. K. Chatterjee & Shah, 1981). Traits such as authoritarianism, prejudice, and anxiety have been found to be associated with similar parental attitudes and practices (Hassan, 1977; Hassan, Enayatullah, & Khalique, 1977; Ojha, 1977). Similarly mothers of maladjusted children were more likely to foster dependency, be irritable, suppress sexuality, encourage little verbalization and rate low on comradeship and sharing than mothers of emotionally well-adjusted children (G. Agarwal, Saksena, & Singh, 1978), and delinquents more often come from homes where normal communications between fathers and sons were blocked (A. Singh & Sharma, 1978). A critical review of Indian studies conducted in this area till the early seventies is provided by Gururaja (1981).

Theorizing on Indian Child Rearing and Personality Development

Four theoretical papers on Indian child rearing practices and their effect on personality development merit attention (Kakar, 1978; Neki, 1976; Roland, 1980; Silvan, 1981).

Neki compared the prevalent attitudes of Western (especially American) and Indian culture toward dependence. His central thesis is that dependence has acquired negative connotation in Western psychological and psychoanalytic

literature and in the Western culture as a whole; however, it lacks such connotation in Indian culture in both theory and practice. Neki's analysis of the psychoanalytic, linguistic, and anthropological roots of the concept of dependency and the cultural relativism in the positive and negative connotations associated with the dependency-independence dichotomy provides a refreshing perspective.

Roland provides a psychoanalytic perspective on personality development in India and discusses differences between Indian and Western child rearing practices and family structure as they affect personality development in each culture. According to his thesis, in contrast to Western emphasis on individualism and personal autonomy, Indian culture stresses symbiotic modes of relating. Silvan disagrees with Roland's assertion that Indian culture is characterized by empathy, higher inner self-regard, and ego-ideal dominance, arguing that Roland ignores the inner processes central to psychic conflict and the development of object relations within the framework of psycho-sexual development. Kakar explores the developmental significance of Hindu infancy and childhood and their consequences in identity formation. (An elaboration of his views is presented in the unit of Identity in this section.)

Social Motives

Studies related to socialization of psychological motives have received somewhat spotty attention and deal mainly with topics such as aggression and hostility, altruism and pro-social behaviors, moral development, sex role development and need-achievement.

Aggression

Majority of the studies in this area examine the relation of two variables namely, social class and sex differences, with aggression. Boys are seen as more aggressive than girls (Malaviya, 1977; S. Rao & Singh, 1981; Venkataramaiah & Barathi, 1977); boys quarrel mostly with brothers and girls with sisters; beating was the most frequent mode of quarreling for males, while accusations and teasing characterized quarreling in females (Venkataramaiah & Barathi, 1977). The finding reported by T. R. Sharma and Sharma (1977) that girls more than boys have a tendency to turn aggression to the environment while boys have a tendency to turn aggression on themselves is somewhat puzzling.

Social class differences indicating children from the lower SES to be more aggressive have been reported by researchers using semi-projective

techniques or self-reports (Malaviya, 1977; N. Pathak & Rastogi, 1980; Varma, 1979). Kureshi and Husain (1982), Pathak and Rastogi (1980), and L. Verma and Sinha (1977), provide data indicating social class differences in direction of aggression. Their findings indicate that lower class adolescents show inwardly directed aggression and exhibit greater number of ego defensive responses (Pathak & Rastogi, 1980); and 9-11 year old subjects from the higher social class showed greater productivity and planning under conditions of frustration (L. Verma & Sinha, 1977).

Interesting data on socialization of aggression is provided by Kanekar and his associates (Kanekar, Duarte, & Kolsawalla, 1981) reflecting the norms regarding aggression in relation to age and sex in the Indian culture. Data suggest the acceptability of non-retaliation or non-violence as a powerful moral weapon.

Evidence supportive of social learning of aggression comes from a study of tribal and non-tribal groups of children by Punetha (1981). In both groups children were not only punished and discouraged from behaving in an aggressive undesired manner, but they were also encouraged and motivated for giving up or unlearning undesired forms by being offered rewards and approval. Observations by Lambert (1981) of children from six cultures also point to the occurrence of much social learning, and forms the basis for what he terms "the cross cultural integrative theory of children's aggression."

In terms of assessment techniques, the cross cultural applicability of the Rosenzweig picture-frustration test along with information on age norms, and reliability and validity of the instrument is of interest (Rosenzweig, 1976).

Altruism, Sharing and Friendship

As children progress in age they tend to use different reference points in evaluating friendship-expectation choice. In one of the few studies in the area of social cognition, Singhal (1980) presents data on 400, 13 to 16 year old children from two school systems (public and government schools) indicating a developmental trend of a shift from activity to personal construct as the focus of friendship relations. A series of studies (P. Bhargava & Gupta, 1978; P. Gupta, 1982; P. Gupta & Bhargava, 1977) indicate that observation of a generous model accentuated the altruistic behavior of young children (5-7 years of age). Boys and low SES subjects were more generous than girls and subjects from middle SES. Another study of N.

Srivastava and Gupta (1981) however, found no significant sex differences in helping and sharing behavior, except with respect to volunteering time to work with the poor wherein girls volunteered more time (in hypothetical situations). Lastly, Naidu (1980) found that institutionalized boys 7-11 years of age were more altruistic than family reared cohorts in a hypothetical marble sharing game. Altruism appeared to increase with age.

Morality, Religion, Values, and Prejudice

Studies in moral development have examined the universality of stages, age, sex, and social class differences, and the influence of factors like religion, school, and maternal disciplinary practices. Evidence indicates cross-cultural universality of stage sequence between ages 8 to 16 years. The level of moral judgement increases with age and is mediated significantly by factors such as social class, sex, religious background, and schooling (B. Parikh, 1980; Saraswathi, Saxena, & Sundaresan, 1977; Saraswathi, Sundaresan, & Saxena, 1980; Saraswathi & Verma, 1976; R. S. Singh, 1981; R. Srivastava, 1977; D. K. Tripathi & Misra, 1979; Varma, 1976). A short term longitudinal study over a period of two years (Saraswathi & Sundaresan, 1979) found that nearly 12 percent of the children regressed to an earlier stage of moral reasoning and there was a high degree of stage mixture during transition periods. Maternal induction is associated positively with moral maturity in both boys and girls (Saraswathi & Sundaresan, 1980; Saraswathi, Takkar, & Kaur, 1979); with social responsibility in males (L. B. Singh & Fatmi, 1980); love-oriented and power-assertive disciplinary techniques on the other hand seem to be associated with guilt over hostility (U. P. Singh & Sowaid, 1976), social responsibility in female college students (L. B. Singh & Fatmi, 1980), and low level of moral reasoning in children (Saraswathi & Sundaresan, 1980).

A series of masters dissertations on socialization for religion at Lady Irwin College (1976-1982) have examined the developmental trends in the acquisition of religious concepts in subjects aged 8 to 19 years. The children came from various religious backgrounds namely, Sikh, Hindu, Christian, Islam, and Zoroastrian, and were interviewed informally. A developmental trend was evident with the concrete religious concepts of earlier years being replaced by abstractions in older children. An orientation of punishment evidence and animism or medical thinking was evident in younger children's responses. Religious socialization in the family played an important role.

The role of parents in influencing the development of prejudice in children is highlighted in three studies (Hassan, 1977; A. Sharma & Anandalakshmy, 1981; A. K. Singh, 1981a). Developmental trends are evident in the observations that: preference for one's own religion and prejudice against others begin to take shape as early as 4 or 5 years and fully crystallize by 8 to 9 years (A. K. Singh, 1981a); and with age, children from both upper and lower SES showed higher preference for upper class and Brahmin caste and assigned more negative attributes to lower class and Bhangi caste.

The ambiguity of role-models and values among Indian youth are examined in a macro-perspective of the social, economic, and political situation of a changing society by D. Sinha (1977a). The study aimed at determining intergenerational differences on three factors: perception and determination of role models, evaluation of events with socio-moral connotations, and judgement of certain ambiguous behavior traits. Results indicated that young college students ($\bar{X}$ age = 18 years) had more varied and unsuitable role models (such as film actors), and were undecided when confronted with situations involving a moral dilemma.

Need Achievement

Personality traits and child rearing practices associated with need achievement have been examined in various studies. Middle class, nuclear family system, and entrepreneurial occupations appear to be associated with higher achievement motivation, while upper and lower class, joint family system, and bureaucratic occupation appear to be associated with low achievement motivation (Ojha & Jha, 1979).

Kalra (1981a, 1981b) presents data on some of the mediating variables between child rearing practices and need achievement. Training in skills of independence, responsibility taking, and planning quite early in their life were characteristic of high achievers among his subjects. High achievers in this study were those who joined their organization as clerks and rose to small case senior positions when compared to low achievers who stayed as clerks. The high achievers also indicated more active interest in their own family members and emphasized achievement oriented values. Low achievers on the other hand emphasized qualities such as being God fearing, obedient, attached to the family, and so on. Supportive data on the association between need achievement and maternal dominance, internal locus of control,

independent, and intelligence comes from the study by S. Singh, Bhandari, and Vanvaria (1981).

Specific focus on the influence of socio-cultural deprivation on need achievement indicates that level of occupational aspiration existed in a hierarchical order corresponding to the SES level of the subjects among the scheduled caste groups and adivasis studied (Jhaj & Grewal, 1976), and was significantly higher in the non-deprived when compared with the deprived group (B. Mohanty, 1980b). Among the disadvantaged groups (as in the advantaged groups) parents of high achievement and low anxiety subjects reported a significantly higher degree of independence attitude and indicated more early demands and fewer early restrictions when compared to parents of other subjects (Tawari & Misra, 1977).

Identity and Sex Role Development

Three prominent psychologists-psychoanalysts, Kakar, Ganguly, and Erikson have theorized on the concept of identity in a cross-cultural context. Kakar (1978) explores the developmental significance of Hindu infancy and childhood, and their consequence in Indian identity formation. The author argues that a carefree and prolonged infancy characterized by maternal indulgence is followed by a period of abrupt separation. The male is projected as tied forever to the mother especially in view of the mother's own longing for the love, unsatiated by the husband in a typical, patriarchal, extended, arranged marriage setting, resulting in a weak oedipal conflict and weak resolution of the same. The birth of the son alone is perceived as giving the female her identity and status and hope for being cared in old age. The resultant clinging attachment to the son, especially the eldest son is taken up by Kumar (1979) as the central theme of her essay on woman's identity.

Erikson, in the essays collated by Kakar on Identity and Adulthood (1979) presents a comparative point of view of his stage theory and the Hindu description of the "stages of life." Of particular interest is the crisis of youth (identity vs. identity confusion) in the context of ideological change particularly in countries facing rapid social change. He points to the core danger that arises when inner or outer conditions prevent the formation of identity (and consequent commitment to a viable world view) related to a convincing ideology and the consequent self negation.

In a somewhat different vein, and writing on the theme of communication, identity, and human development, Ganguly (1976) contends that identity must be understood in terms of the inter-relatedness of community, communication, creativity, and persons. He elaborates that personal identity at the systemic level (i.e., biological, social, and cultural) is being manipulated and dominated by personal identity at the group level (i.e., participatory and ritualistic) damaging the actualization of individual identity (creative identification and differentiation of self from others). The damage occurs in the form of a complete loss of any sense of reality, whether it is about our daily use of commodities or opinions about public matters and by the false or defined identities planted into us by the mass media, be it regarding a "happy family" or "a good match."

Studies on sex role development reiterate the belief in male superiority in Indian society and the differential socialization of boys and girls. The salient findings related to factors which influence the development of sex roles are summarized here.

Rural children and those from upper castes seem more clearly aware of appropriate sex-role patterns than urban children and those from the lower castes (Dixit & Gupta, 1977). A probable explanation for caste differences is provided by Dhruvarajan (1981) who studied women of Sudra (low caste) and Brahmin (high caste) to test two hypotheses: one drawing upon Piaget's theory that the women from the Sudra caste will tend to have a higher level of self-differentiation (because of their greater freedom of experience) than women from the Brahmin caste. The second, stratification hypothesis conceptualized that membership in an upper strata of society provided better scope for development of self-differentiation. Their results favored the latter hypothesis.

Ghadially and Kazi (1979) report that female college students who held non-traditional sex-role attitudes came from nuclear families, had educated mothers, and were in professional or career oriented disciplines. The influence of mothers' employment on daughters' sex-role development is seen in the study by Dixit and Vishnoi (1980) wherein 13-17 year old daughters of employed mothers showed higher masculinity scores (as measured by MMPI) than did the daughters of unemployed mothers. N. Sharma (1985) reports a curvilinear relationship between traditionality and identification with the

expected sex-role in her study of urban and rural adolescent girls from three socio-economic groups.

A few studies report on cross-cultural comparisons. Williams, Best, Hague, Pandey, and Verma (1982) comment on the pan-cultural generality in sex-trait stereotypes among young children (5-8 year olds) and university students in India and Pakistan. Despite greater emancipation of Indian women in terms of their greater participation in politics, commerce, and education, in both India and Pakistan, traits associated with men were stronger and more active than those associated with women.

Sex differences in interpersonal relationships among American and Indian women were examined by Norman, Murphy, Gilligan, and Vasudev (1981). In both cultures the male child was given more choices. However, the discrepancy between the choice of male vs. female child is greater in the Indian subjects and is most marked in the Indian female subjects. Sex differences were also found in the number of relationships mentioned; females in both cultures mentioned a higher number of relationships than did males. Differential socialization appears to begin very early. Graves (1978) observed the interaction of 7-18 month old infants and their mothers. Mothers were seen to initiate more interaction, were significantly more responsive, and showed a distinct pattern of reciprocity toward sons than with daughters. Sex differences in socialization and their link with personality variables are seen in empirical data related to fear of success in Indian girls and women (S. Singh, 1981; S. Singh & Varvaria, 1977; Varvaria, Agrawal, & Singh, 1981) and superiority of females in a social memory task (Thakur, Shahi, & Kumar, 1981). The observation that working women experienced the greatest conflict over the mothers' role and the reported negative effects of work on marriage is of interest (G. R. Gupta & Ganguli, 1982).

Finally, a word about some recent studies in the area of socialization which have attempted to utilize ethnographic and anthropological approaches to the study of child socialization in the natural setting (see Saraswathi, 1981; Varma, 1981, for a detailed discussion on approaches to the study of socialization.

Use of ethnographic approach in child study in India has been initiated by Anandalakshmy and her associates (see Anandalakshmy & Bajaj, 1981 for detailed references) to study socialization for competence in children from communities pursuing traditional crafts such as weaving, toy making, and mat

making. The in situ observations and in depth interviews related to the acquisition of social competence indicates that craft skills are acquired tacitly in the course of growing up. Learning appears to be more important than teaching. It is significant that a sense of personal efficacy is more easily attained by children in traditional craft families who do not have to face "compulsory competition." Significant differences are obvious in the socialization for autonomy and independence of boys and girls. Interpersonal competence was emphasized even though socialization for acquisition of craft skills was task related rather than person-related.

In other series of studies conducted by Saraswathi and her associates (see Saraswathi & Dutta, 1985 for detailed listing of references) the structuring of the daily life of children in poor rural and urban slum communities was observed from an ecological perspective, attempting to integrate the micro level daily time schedule with the goals of child rearing in the family and the larger community. Distinct sex differences in socialization emerge with occupational competence as a goal for boys and competence in household tasks a goal for girls' socialization.

Representing a social-anthropological approach two studies by Aphale (1976) and Raz (1976) provide detailed descriptive account of the socio-cultural milieu within which the child is socialized. Aphale, based on interviews of 700 Hindu, Maharashtrian families from different socio-economic status, builds an intricate picture of their daily life schedule, family social structure, education, recreation, and other socializing influences. The psychoanalytic bend is apparent in the child rearing practices in the rural/tribal settings studies by Raz (1976).

Problems of Adjustment

Problems of adjustment during the critical stages of development are associated with both contemporaneous factors and the antecedent life conditions. Studies examining problems associated with major life stages are presented in this section.

Childhood

Studies of adjustment problems during school-age have a clinical orientation. Specific problems that receive attention include those of hyperactivity (Chawla, Sahasi, Sundaram, & Mehta, 1981; Nagaraja, 1976); emotional maladjustment (Marfatia, 1976); and deafness (Pershad, Gudi, & Arora, 1981). Behavior modification techniques have been used with success

both in the clinical setting (Arora & Srinivasamurthy, 1976; Behre & Srivastava, 1981; S. C. Bhargava, 1981) and in the school setting (Mallya, 1979) with normal pre-school children. No attempt has been made to present a detailed review of mental health problems as a separate chapter will be devoted to the same in this volume.

Adolescence

Though the study of adjustment problems during adolescence has continued to be a favorite topic of research, the quality of contribution has not kept pace with the quantity. The definition of the construct "adjustment" itself has been an artifact of its measurement; the tools of study are limited to self reports; and further, when attempts have been made to correlate two or more sets of variables, e.g., personal and social adjustment, the data source has been the same, thus limiting the usefulness of the observed correlations.

The major findings that emerge reveal greater incidence of adjustment problems in only children (Doss, 1980); urban adolescents in general (Sultana, Siddiqui, Qamar, & Siddiqui, 1981); but rural adolescent girls in particular (Sudha, 1979). Socio-cultural disadvantage is reflected in the greater incidence of emotional and health problems (V. R. A. Reddy, 1979) and lower self esteem of adolescents from poor families (N. Rao, 1978; N. Rao & Shankar, 1977). Case studies of adolescents and youth indicate parental, developmental, and social causes of sexual problems and need for guidance (Nagaraja, 1983), and perception that they as well as their parents are operating at the maladjusted level of interpersonal behavior (Dhammi, Satyavathi, & Murthy, 1978).

Based on responses to Mooney's check list, M. Gupta and Gupta (1980) report that majority of the 500, 14 to 18 year old adolescent girls in their study found adolescence to be a period of calm transition from childhood to maturity; a finding contrary to that usually reported in this area of study. Some problems were reported as related to social and personal adjustment to school. Areas of least concern were physique and health, courtship, sex and marriage, a finding of interest to cross-cultural research.

Two studies deal with cross-cultural comparisons. A study of Indian, American, and Australian 9th graders (Poole, Sunberg, & Tyler, 1982) found that Indian adolescents indicate the least amount of autonomy, and least influence in family decision making. Of related interest are problems of Indian and foreign students in Indian Universities (J. G. Singh, Singh, &

Goburdhun, 1982). Among the age group 19-22 years, foreign students in India reported significantly more problems related to health and physical development, adjustment to college work, curriculum, and teaching procedures. Indian students on the other hand reported more problems related to finances and living conditions, morality and religion, and their vocational and educational future.

Three important books have been the outcomes of theorizing and empirical data related to problems of youth, their adjustment and socialization with specific reference to social change. In his study of "rural youth" Karanth (1981) offers insights into parental aspirations, community reactions, and shift in traditional caste-class interactions of youth studying in cities and their consequent dualistic attitudes and situation based coping. Adjustment problems similar in nature are described by Garg and Parikh (1976) in their study of youth from transitional modern homes. With a retrospective, anthropo-clinical methodology and an informal style of case presentation, the authors describe the double bind of parental expectations accentuated by discontinuity in a large college/university setting. Both these studies enumerate problems which have implications for emergence of identity discussed in earlier sections. The book "identity and adulthood," edited by Kakar (1979) is a landmark in this area and exemplifies an interdisciplinary approach, integrating philosophical, theoretical, and empirical perspectives.

Aging and adjustment

Interest in gerontology in Indian has been primarily related to adjustment problems of the aged. Here too, inventories, interviews, and other self-report measures have been the preferred techniques of investigations. Some position papers on gerontology and geriatric psychiatry have been included in the review as they merit attention by indicating some priority areas of research.

Retirement, possible reduction in income, loss of spouse, and deteriorating health create changes in the roles of the elderly, often leading to problems of adjustment. A series of studies by Anantharaman (1979a, 1979b, 1980a, 1980b, 1980c, 1980d, 1981a, 1981b), Deoras and Janabandu (1979), N. Mohanty (1982), Paintal (1976, 1978, 1979), and Ramamurthy (1976, 1979) indicate that well adjusted subjects on the whole enjoyed good physical health, had a positive self concept, had more friends,

participated in more leisure and recreational activities, and complained less of being lonely.

Adjustment to institutionalization: A few studies have examined problems of institutional living in old age and have compared these with the old people living with their children. Institutional living in old age continues to be atypical in our cultural context and hence comparisons with those living with families need to be qualified. Studies to date (K. Agarwal & Rastogi, 1979; Anantharaman, 1980a; Gomathi, Sitharthan, & Anantharaman, 1981; Sasi & Sanandraj, 1982) indicate that institutionalized subjects perceived more health problems, were less active and had higher alienation scores (self report) than those living with their families. Adaptation to institutional living seems to take place over a period of time and can be facilitated by institutional care and rehabilitation measures.

Differences between generations and across cultures: Recent students have brought to light some intergenerational differences in perception of characteristics of old age, conformity to traditions, and religious beliefs. Results indicate that older subjects ($\bar{X}$ = 59.6 years) perceive more worries in old age and more positive characteristics of the aged than do the youth below 22 years (Anantharaman, 1979c); and illiterate subjects were more conforming than young and educated subjects (Quraishi, Motvani, & Kaura, 1981); and generational differences in attitudes towards issues such as marriage, family structure, and traditionalism appeared to be wider in urban than in rural samples (R. C. Mishra & Tiwari, 1980).

Interesting cross-cultural data on perception of life satisfaction by 80 Asian-Indian and 80 U.S. retired citizens is provided by Fry and Ghosh (1980). Consistent with predictions, the attributions of the Asian group showed religious faith, service to others, family ties and luck as being important factors contributing to life satisfaction. By contrast, more Americans reported that hard work, personal abilities, travel and recreation, and social status had significantly influenced their life satisfaction. Findings are interpreted in the light of cultural and socio-psychological variables that influence the attribution for life satisfaction.

Gerontology and geropsychiatry

Two position papers on welfare programs for the aged and geropsychiatry highlight issues of concern for studying the aged and the aging process and

in the planning of suitable social welfare programs to meet their needs. Parthasarathy (1980) reviews census reports and other statistical data on the aged and outlines some of the demographic, social, and health aspects of aging in India and also various welfare measures available and planned for them. Extensive use of secondary data sources presenting information on a nationwide sample is practically non-existent in developmental psychology in India, and the present report indicates promising possibilities (though that was not its aim).

A. V. Rao (1979) presents a case for the increased importance of geriatric psychiatry in India, in the context of the position of the aged in India, a plea well strengthened by data presented by Ramachandran, Menon, and Ramamurthy (1979) that the rate of psychiatric disorders in subjects over 50 years is 350 per 1,000 population. The authors isolate three factors, namely, general disease, isolation, and family cohesion, among the variables related to psychiatric diagnosis. A. V. Rao extends suggestions for research in areas such as socio-cultural practices, changing attitudes, and national economics in terms of their potential contribution to preventive geriatric services.

IV. CHILD DEVELOPMENT RESEARCH AND SOCIAL POLICY

This section deals mainly with researchers, reviews, and position papers that have clear implication for child development research and social policy in India. No attempt has been made to present a comprehensive review of researchers in child welfare except to utilize available information where appropriate. (For detailed review and bibliographic listing of researchers in child welfare in India, see Khandekar, 1979).

The need for an active role by psychologists in general and developmental psychologists in particular in programs and social policies for children and families has been often emphasized. Concerned by the failure of developmental psychology in making an impact on decisions related to child welfare and policy issues, A. Verma (1979) examined the reasons for the same. She identified the major problems pertaining to (a) the organizational structure of child development programs; (b) the funds and funding procedures; (c) training and orientation of research personnel; (d) the methodology of research; (e) the unquestioning leaning on Western theories underlying research; and (f) inadequate dissemination of researches.

D. Sinha (1977b) argues that in developing countries, where the battle against poverty is a dominant concern, and involves transforming the social structure, institutional attitudes, motivation, and value systems, psychologists must try to determine factors that facilitate or inhibit social change and predict the negative consequences to development. The commentary by Anandalakshmy (1979, 1980) based on a review of researches in child development in the early and mid seventies is optimistic in this regard. She views the study of child development as gradually getting more responsive to new social needs and to the tendency to converge on issues of immediate application to social problems.

The declaration of the International Year of the Child has helped in crystallizing the emerging trend of social concern and relevance in child development research. The IYC focus on issues and problems associated with program planning and policies related to children (See IYC in India, 1980) has yielded a bonanza in terms of publications that were the outcome of debates, seminars, and conferences with reknown scholars in the field (de Souza, 1979; Gokhale & Sohoni, 1979; Profile of the Child in India, 1980; Srinivasan, Saxena, & Kanitkar, 1979; & A. Verma & Agnihotri, 1981). These and several other works reviewed in this section have made a significant contribution by integrating research available on various aspects of child welfare and development and attempted to provide a broad conceptualization based on critical analysis of planning and delivery of services for children.

The recurring themes present in all these publications* are (a) Demographic, planning and policy concerns; and (b) Programs and welfare services.

Demographic, Planning, and Policy Concerns

The implications of resource availability and allocation in terms of shifts in demographic indices such as child-adult and male-female ratios, fertility rates, infant and child mortality, and future projections have been presented. The articles exemplify innovative and extensive use of secondary

*Reference has been limited to editors only because of space limitations. (See de Souza, 1979; Gokhale & Sohoni, 1979, Profile of the Child in India, 1980; Srinivasan, Saxena, & Kanitkar, 1979 for specific references.)

data and attempts at model building to understand demographic phenomena. Interstate, rural-urban and sex differences are observed in most indices (also see Kaur, 1978).

A number of articles have examined planning and policy provisions related to children. The inconsistencies that prevail and the adhoc approach adopted in evolving a national policy for children has been criticized for inadequacy, inappropriateness, and fragmentation. The plea for integrated, convergent (rolling) planning with a developmental approach preferably monitored by a specialized agency comes through strongly, instead of short term inputs. The issues of lack of resources and international aid, priority areas, and contingently quality vs. quantity have also received considerable attention.

Programs and Welfare Services

A broad range of publications focus on children with special needs. The articles evidence various perspectives, some dealing with specific programs, some with alternative strategies and others with more broad based conceptualizations. The social concerns that have received attention of researchers include: child labor, legislative provisions and protection accorded to children, care of destitutes and orphans, programs for handicapped children, custodial care and rehabilitation of delinquents, residential child care, adoption and foster care to provide a support system to children who become casualties in a developing economy. The authors have also attempted to evaluate programs and highlight aspects related to success and failure. Involvement of the community, training grass-root workers, and constant supervision emerge consistently as factors underlying success. Further, the authors emphasize the need for objective, periodic, and developmental assessment, as well as the need for identifying salient features that lead to success of a program rather than replicating in toto. That awareness and availability of services leads to greater utilization is a point well made by the NIPOCD study on working mothers in Delhi and Allahabad (1978).

Let us presently examine in greater detail the nature of research evidence feeding into three basic and much studied services for children, i.e., in the areas of Nutrition, Mental Health, and Education.

Nutrition Programs

A series of reports (Devadas & Chandrasekhar, 1982; Gopaldas, 1982; P. Rao, 1982; Rajalakshmi, 1982; Rajalakshmi, Ramachandran, & Sail, 1982) deal with data related to efficacy of supplementary nutrition in early childhood and nutrition education of mothers. Evidence of successful application of behavioral science principles of cognition, motivation, and action in bringing about behavior change is seen in a nutrition education project for rural pre-school children (Matthews, 1977 cited Matthews, 1979).

Mental Health Services

The ecological aspects of behavioral problems referred to a Community Child Guidance Center have been examined by M. V. Singh and Dagar (1982). Analysis of the case records of 332 children to determine correlates of various types of behavior problems highlights the influence of family structure, parental education, economic status, and employment of mother. De Souza, Deshmukh, Merchant, and Shah (1978) present the analysis of 1789 case records. Two observations merit special attention (a) practically twice the number of cases are male; (b) fifty percent of the cases referred to the clinic are mentally retarded and do not necessarily suffer from behavior problems.

Specific behavior problems that have been studied include those of the hyperactive child (Nagaraja, 1976), the emotionally maladjusted children (Marfatia, 1976), deaf children (Pershad, Gudi, & Arora, 1981) and the Down's anomaly (Somasundaram & Papakumari, 1981). Mehta (1982) breaks new ground by examining the little explored problem of child abuse in the Indian setting.

An examination of alternative strategies and approaches to dealing with special needs of children offers promising possibilities. These include use of behavior modification in classroom settings for minor behavior problems (Mallya, 1979), and in clinical settings for treatment of encopresis (Behre & Srivastava, 1981), stammering (S. C. Bhargava, 1981) and autism (Shivarathamma, 1979). The presentation of the behaviorally oriented treatment procedures by Arora and Srinivasamurthy (1976) are of interest to clinical psychologists, parents, and teachers. The role of a Child Development worker as a member of the team is being increasingly recognized in Child Guidance Clinics (Mohite, 1979).

Education: Reaching the Disadvantaged

Concern for identifying and understanding of educational problems of the disadvantaged children and developing viable remedial programs continues to hold the attention of researchers in developmental psychology, education, and related disciplines (see articles in Srinivasan, Saxena, & Kanitkar, 1979, & de Souza, 1979). Murlidharan (1983), Murlidharan and Kaur (1983), and A. Verma and Saraswathi (1980) present research evidence in favor of preschool education for the disadvantaged and the need for expansion of these programs.

The results of the nationwide NCERT project on pattern of school achievement in primary grades has been reviewed critically by B. B. Chatterjee (1977). He attempts to elucidates the nature and extent of relationship between school and home, and school achievement and cognitive development in children 5 1/2 to 11 years of age in grades 1, 2, and 5 (see Malani, Murlidharan, & Bevli, 1978 for detailed report). The broomstick effect discussed in the earlier section (Section II on factors influencing cognitive development) is evident here also with no systematic difference in grade 1 but a widening disparity between the advantaged and disadvantaged by grade 5.

Subsequent studies (e.g., Rath, Dash, & Dash, 1979; Sahu, 1979, 1982; Sahu & Mishra, 1980) have reiterated some of the same observed differences and clarified some others. In an interesting cross-cultural study (Sahota, 1977) of the ecology and educability of children in three countries (Brazil, India, and USA), the focus was on three ecological variables: parent's (particularly mother's) education; family income (or income inequalities), and home environment (especially quality of the house). Among the socio-economic and family-connected variables, the most important variable for the child's educability was found to be parent's education, which accounted for the highest percentage of explained variance in the samples of each of the three countries. With regard to the relative influence of mother's education, the results strongly favor the former. Income remains a potent determinant of educability in all countries and communities but is less important than parent's education. The results suggest that parent education is the most effective way of raising the education of children. The only cross cultural difference that emerged was that the quality of house is not very important in poor countries with a tropical climate, whereas it is highly important in rich countries with a cold climate. Importance of

parental expectations besides other socio-cultural variables related to home environment in the educational attainment of children is demonstrated in the studies by Jehan and Ahmed (1980), and Nundy and Singhal (1981).

Khan (1980) in his sociological study explores environmental factors affecting school attendance in the context of labour/employment among the rural poor. Child socialization goals and practices have been sensitively presented and discussed in terms of sex, education, caste, religion, and socio-economic status. Recommendations have been forwarded to prevent school drop-out and to improve the school facilities within environmental constraints. A number of other leading workers in the field (Chitnis, 1979; Mehra, 1982, Murlidharan & Kaur, 1983; J. P. Naik, 1983; Rath & Patnaik, 1979; Rath, 1982; A. K. Sinha, 1978) offer suggestions for improving the quality of education for the disadvantaged children, and for facilitating the development of cognitive/language competence and academic achievement. Propagation of non-formal education as a viable alternative model (J. P. Naik, 1980, 1983), has picked up momentum and creative experiments and action research projects (C. Naik, 1978) are beginning to throw light in its potential value.

In conclusion, it can be stated that social concerns and problems related to program implementation have challenged researchers and caused broadening of perspectives leading to some creative conceptualizations, for e.g., the economic perspective of child welfare treating inputs as investments in human resources (Panchamukhi, 1979); inclusion of cultural constraints in program planning and implementation of adoption and foster care (Sohoni, 1976); and utilization of behavioral science principles in planning and execution of programs (Matthews, 1979). Unfortunately, basic research in developmental psychology has not kept pace and its potential contribution has been only marginally recognized by the policy makers and the researchers themselves.

There exists a close and intricate relation between basic research on psychological processes and its applied aspects in the welfare setting. In fact the relationship can be described at three levels corresponding to the planning, implementation, and evaluation stages of welfare programs. (a) Antecedent, wherein developmental psychology can help identify specific needs of the target group, and prioritize the same in terms of resource inputs at the planning stage; (b) Co-existent with the implementation stage, to assess

the socio-psychological components accompanying change in knowledge, attitudes, and practices; (c) Subsequent, overlying the evaluation stage, developmental psychology can aid in the understanding of adjustments inherent in change and in evaluating developmental shifts. This post hoc analysis serves as foresight for replication or as the next stage in the chain reaction of change/development process. Thus, progress in developmental psychology can gain momentum through a synergistic relation between basic and applied research, the latter raising socially relevant issues and questions and the former enriching both the field programs and theory building through its intelligent answers.

V. CONCEPTUAL AND METHODOLOGICAL ISSUES

The present survey of researches since 1975 indicates that there is reason for optimism in view of the manifold increase in the studies conducted in developmental psychology, an increasing sense of social relevance and a beginning of theorizing that takes into account the Indian cultural context. At the same time there is also much cause for concern. The malaise that plagues researches in the field related to both conceptual and methodological issues and these will be dealt with briefly in the present section. A detailed presentation of these has not been attempted as they have been examined critically in the recent past (see Anandalakshmy, 1982c; Khalakdina, 1979b) and will also be examined in considerable detail in a separate chapter of this survey report.

Many of the problems characteristic of research in developmental psychology are to a considerable extent common to other fields of psychology as well. However, developmental psychology has added problems by virtue of (a) its most recent entry into the field in India when compared with experimental or industrial psychology, and (b) the unique aspects of research design and subject characteristics it has to contend with. Some of the major problems that need to be attended to by researchers in the field if their contributions are to be useful and productive, are listed herein.

1. Most studies exemplify the absence of a clear conceptual framework. There is a heavy leaning on Western theories and researches for ideas with little concern for its relevance to the ecological context. Little attempt is made to review Indian literature in order to provide a conceptual base. (A tabulation of foreign vs. Indian references cited in 171 studies showed that 102 of them used above 75 percent American references and of these 27

used only foreign references. When Indian references were used a large number of citations were of the author's own work.)

2. An examination of the research designs used indicates a pre-ponderance of descriptive studies with little effort to move to an explanatory level. Even in descriptive studies, the focus remains on global, distal variables resulting in slow progress in teasing out the crucial mediating or process variables.

3. The rationale, if any, for sample selection is seldom specified. Selection is often incidental or based on easy availability rather than on planned design or choice. The fallacy of considering large sample size as a cure all for all methodological problems also prevails resulting in reporting of statistical significance even when the relationship is only an artefact of the large "N."

4. Two points that deserve special mention in relation to the choice of tools and techniques for data gathering are: (a) continued leaning on tools developed for use in the West, despite grave concern expressed by cross cultural psychologists regarding their suitability to non Western populations (see Cole & Scribner, 1974; Serpell, 1982; Triandis & Berry, 1980); (b) utilization of self-constructed tools with scant concern for establishing the reliability and validity of the said measures.

5. An analysis of 213 studies among those reviewed in this survey reveals that at least 150 used psychometric measures or psychological tests as the major technique of data collection, whereas only 6 studies by Indian researchers used observation.

6. Of related interest is the striking absence of utilization of secondary data sources such as large scale census reports or national surveys or from a major research project carried out by a national agency. "The Endangered Sex" based on Indian Census Reports and ethnographic records (Miller, 1980) could serve as a model in this regard.

7. It is a matter of grave concern that despite the awareness that trends in growth and development, individual differences in patterns of development, and definitive antecedent-consequent relationships can be best studied through use of longitudinal follow-up of subjects, constraints in funding and absence of continued commitment on the part of researchers has resulted in few studies of this nature.

8. Use of inappropriate statistical measures and consequently misleading inferences based on the same is yet another cause for concern. Even a cursory glance at the results reveals (a) the application of parametric tests when data clearly does not warrant the same, (b) inference without testing for the significance of the differences or correlations, (c) elaboration of main effects ignoring the statistically significant interaction effect, (d) use of Chi-square when many cell frequencies are zero, and (d) use of single factor classification and analysis when multiple variables are assessed. With access to computer facilities it should be possible to venture into more complex forms of analyses such as multiple regression, time-series analysis, sequential analysis, and trend or path analysis that would yield information regarding the complex interaction among variables.

VI. FUTURE DIRECTIONS

Having assessed the strengths and weaknesses of the discipline as it stands currently, it is perhaps pertinent here to indicate some future directions in theory, research, and dissemination of information.

1. Concern for social relevance

There is undoubtedly an increasing sense of social accountability on the part of researchers in the field (this being at least partially influenced by the policies and demands of the funding agencies). However, when we take stock of what answers does research in the field have for social programs and policies related to children, youth, and the aged, we realize how little we really know. When it comes to definitive answers to questions such as: Is the effect of malnutrition on mental development irreversible? What would be the essential knowledge content for better parenting? How best can we improve the learning potential of the disadvantaged children? We can only theorize and often come up with equivocal findings understandably unconvincing to the social policy makers. Concerted effort on issues of immediate public relevance till some conclusiveness is attained could help ameliorate the condition.

Developmental psychologists should be encouraged to undertake more field based researches so that we have a sufficient body of knowledge about the real Indian child (in contrast to the deficiency profile we have judged by the yardstick of Western measures administered in contrived settings to "captive" children).

2. Evaluation research

A related concern is for increasing the involvement of and participation by developmental psychologists in evaluation research. Whether it is the assessment of the efficacy of supplementary nutrition in eradicating malnutrition and promoting mental development, or evaluating the impact of ICDS programs on school enrollment, attendance and academic performance, evaluation research yields a rich data base for understanding factors which influence growth and development. Further, evaluation research yields a rich data base for understanding factors which influence growth and development. Further, evaluation research of national programs such as ICDS also provides access to large scale representative sampling and scope for assessment of long term impact seldom available to individual researchers.

3. Interdisciplinary studies

Some of the most challenging problems in developmental psychology lie at the cross roads between disciplines such as behavior genetics, pediatrics, nutrition, and child development; anthropology, cross-cultural psychology, and developmental psychology; and geriatrics and life span development. Yet, unlike the developed countries where specialists have gained by pooling together their expertise and working as a team, we have shown little team spirit preferring to work in isolation on narrow problems. Studies in the area of infancy, old age, or on topics such as malnutrition and mental development, or ethnographic or ecological studies on socialization could well profit from team investigation with cross fertilization of subject matter expertise from one field, and methodological advantage of another.

4. Process and substantive research

The field of human development or developmental psychology though born out of social relevance (see Sears, 1975) has to rely on a sound data base related to understanding the basic processes of human development and their universality or culture specificity. Hence, it is imperative that as much attention be paid to development of theory and empirical research on fundamental processes as to seeking solutions to social problems.

As a corollary, there is also a need to blend descriptive and experimental studies in a meaningful way. Descriptive research provides a rich array of hypotheses which in turn must be tested under carefully controlled conditions using an experimental design. Similarly the laws of

behavior observed in laboratory settings need to be assessed in natural settings before they can be generalized.

5. An ecological perspective

A related issue is that of ecological validity whose significance cannot be overemphasized. Emphasis on ecological validity that figured prominently in the theorizing and research by Lewin (1951) and Barker (1968) has received additional impetus with the publication of Bronfenbrenner's "Ecology of Human Development" (1979, also see Parke & Asher, 1983). Interpreting behavior in terms of the micro, meso, and macro contexts in which human beings grow and develop needs to be heeded to particularly by developmental psychologists in our country. A beginning that has been initiated in this direction (see Anandalakshmy, 1982b; G. Misra, 1983; Saraswathi & Dutta, 1985; D. Sinha, 1982b) needs to be strengthened.

Serpell (1982) comments that psychological research in Third World Countries should pay more attention than it has in the past to interpretations of behavior and experiences by members of the local population. Since people structure their physical and social environment, an understanding of how they interpret that environment and the behavior which occurs with it, will provide clues for how to analyze the interaction between people and their environment in that setting.

Faced with the fact that the child and his family are influenced by and influence a multiplicity of factors, we cannot continue to study the child as being shaped in a vacuum of constancy or at the most a single variable at a time. The challenge to the developmental psychologist in India and the other Third World Countries is for courageous innovation in methodology avoiding the temptation of following the well trodden paths.

6. Meta-analysis and meta-review

An innovative strategy in the utilization and integration of prior research is the use of meta-analysis to review literature (Glass, 1978). Unlike the usual reviews which are often a mere narration of previous findings (including contradictory findings without attempting to explain the same), the meta-review expects the author to utilize the results of the previous studies integrating them in a systematic manner such that if another reviewer were to review the same set of studies, he would come up with very similar conclusions. In other words, a meta-review is like a carefully

conducted research study that can be replicated and not one that would vary reflecting the individual reviewer's bias.

Since review of literature is a particularly weak component in most of the research published currently, it would perhaps be useful to encourage our researchers to utilize the strategy of meta-analysis. Funding agencies and reviewers for the same, hold the responsibility of discouraging studies that are mere shots in the dark and do not build on previous work. However, as the task of meta-analysis can be rather demanding and somewhat beyond the resources available to young researchers, funding agencies could commission senior researchers in the field to prepare meta-reviews on selected topics of priority interest.

7. Areas of research priorities

It is difficult at this stage to identify just a few areas wherein more research is needed in the field. Practically all areas of study have gaps in information which call for further research. Even in those areas wherein a fair amount of data base is available, there is need for an ecological perspective and synthesis of available information. There are, however, a few areas wherein hardly any information is available or the information that is available focuses only on a specific topic, and these have been highlighted here. It would be a worthwhile exercise for a group of developmental psychologists and specialists from related disciplines to meet and identify a list of priority areas for further research.

Specifically, very little work has been done in the area of infancy except for studies on motor and mental development of infants. Studies on biological determinants of behavior, perceptual and cognitive development, mother-child interaction, attachment, etc. during infancy are noticeably absent. Infancy studies are more demanding in nature (in contrast to the ease with which data can be collected from school age subjects using paper-pencil tests). Yet, the most crucial information on the origins of human behavior and development, be it biologically determined or acquired through social learning, can be obtained only by the study of infants.

Work in the area of social cognition is another conspicuous gap. So also is information related to socialization of children in varied community settings. What little information we do have is the product of the research paradigm and artefact of tools which aim at obtaining only opinions, attitudes or perceptions but seldom reach the behavior in context.

Two other areas wherein there has been an increasing interest in the past decade and consequently a fair amount of information, is related to consequences of deprivation in general and malnutrition in particular. In view of the availability of some data base the next step would be to move from a deficit model to that of identifying environmental potentials for optimizing development within a socio-economic context that will not change drastically in the decades to come despite political rhetorics.

The other priority area relates to evaluation research assessing the outcome of national level intervention programs on nutrition and child development in terms of cost benefit analysis. As mentioned earlier, these can best be conceived as a large scale coordinated series of researchers by interdisciplinary teams.

Other areas that deal with socialization during adulthood and old age in the context of social change are women's employment and child care alternatives, and aging and adaptation.

Yet, another exciting area of research could be the study of life history or life course development attempting to link the impact of the major events in individual's life as well as in the macro environment on the successive stages of development through life span.

8. Publication and dissemination of information

Finally, a word about some issues related to publication and dissemination of information. Exchange of research information in our country is bad at its best. To provide just one example, in contrast to the 100 percent response we had from foreign colleagues to requests for reprints of their articles and list of publications for the present survey, there was a less than 10 percent response from Indian colleagues (more than 100 requests were sent out to Indian researchers with 25 personal notes and reminders).

With the introduction of merit promotion in universities has provided an incentive to publish, it has not been without adverse consequences. The "publish or perish competition" has resulted in an increase in the number of "one-variable-at-a-time" research papers, when a single publication based on a multivariate analysis would have been more useful from the point of view of the advancement of the field.

A related concern is the predominance of publications in non-review journals. An important step in improving the quality of published research

would be to have the articles reviewed carefully and critically, preferably using the system of blind reviews. In fact, critical feedback about research methodology and publication style could themselves contribute to training in research methodology and scientific writing.

A good deal of the burden of responsibility for building a sound body of research information lies with the editorial boards of journals which are the main avenues of dissemination of information. Journal editors and reviewers have the responsible role of gate keepers who can build the quality of published work in the field and enable it to attain a prestigious standing.

9. Text books and books of readings

In response to the plea for Indianizing the field, some purposeful attempts at preparation of text books and books of reading and research monographs have been made (Bevli, Murlidharan, Malani, Kaul, & Ramachandran, 1981; Kale, 1978; NIPOCD, 1979b; Panda, 1981). All these are basic books with slight variations around the following core content: historical development of the field; methods of child study; determinants of development; physical-motor, cognitive-language, social-emotional aspects of development; personality development, and behavior disorders or special needs of children.

Bevli et al., (1981) have edited the textbook for class XII and have presented the matter in a simple and comprehensive manner. Panda (1981) has emphasized play and interest development in children, while Kale (1978) has included a section on child guidance and therapy. The last two, however, seem too simplistic considering that they are meant to cater to undergraduate classes. There is also plenty of scope for integrating Indian research findings, growth norms, recent theoretical ideas, and some assessment measures developed in our country. NIPOCD's publication "Some facets of child development" (1979b) endeavors to present current status of child development/welfare in India and includes monographs on population issues, health and nutrition, and social issues like plight of scheduled caste children, pre-school education, and parent-teacher education.

Parameshwaran and Bhogle's publication on developmental psychology (1979) presents papers which are an outcome of an interdisciplinary workshop. It includes specific studies on adolescent adjustment, vocational and sex-role development, mental retardation, and discussions on the status of research and research issues related to old age and perceptual development.

Though the book is a step in the right direction it has only scratched the surface. An indepth analysis of specific issues would have facilitated insight into the field. In this regard, the edited books by D. Sinha (1981), D. Sinha, Tripathi, and Misra (1982), and Kakar (1979), which present an indepth coverage of a specific topic of inquiry, have made a valuable contribution to the field.

CONCLUDING COMMENTS

Research in developmental psychology in India has broadened in scope in the last decade, extending its horizon across various aspects of development and different stages of the life span, even though some areas and stages have received more attention than the others. Some centers for advanced studies in psychology/human development stand out in terms of their contribution (both qualitative and quantitative), as well as in the concerted effort to probe deeply into socially relevant areas of inquiry.

In general, there is an encouraging trend of responding to the social pressures to provide answers to the ways and means of tapping the environmental potentials to improve the quality of life of people (particularly health, education, and parenting), accompanied by greater involvement in intervention programs. On the other hand, focus on theory building and empirical study that stand as foundations of knowledge have not been neglected, even though gaps in information call for greater investment.

Dissemination of information, however, continues to be inadequate. Many departments which have an extensive program of masters and doctoral dissertation (and produce good quality work) have considered it obligatory to share their work. With the changing attitudes toward publications, one hopes there will be more sharing as this will serve to enrich the field.

Finally, as many areas of inquiry in human development lie at the cross roads of developmental psychology and other disciplines such as genetics, biology, anthropology, and so on, a healthy trend of interdisciplinary studies, which are at present conspicuous by their absence, is something the field has to strive for, in the coming decade.

REFERENCES

- Abravanel, E. (1977). The figural simplicity of parallel lines. Child Development, 48(2), 708-710.
- Agarwal, G., Saksena, N. K., & Singh, S. B. (1978). Child-rearing attitudes of mothers of emotionally adjusted and maladjusted children. Indian Journal of Clinical Psychology, 5(2), 111-116.
- Agarwal, K., & Rastogi, M. R. (1979). Living conditions and feeling of alienation among aged. Psycholinguistics, 2(1), 45-53.
- Agarwal, S., & Bohra, S. P. (1982). Study of the personality pattern of high and low creative children. Child Psychiatry Quarterly, 15(4), 136-139.
- Ahmed, S. (1980). Effect of socio-cultural disadvantage on creative thinking. Journal of Psychological Researches, 24(1-2), 96-106.
- Ahmed, S., & Joshi, R. K. (1978). Creativity growth among disadvantaged children. Psychologia: An International Journal of Psychology in the Orient, 21(3), 161-166.
- Anandalakshmy, S. (1979). Recent research on the young child. The Indian Journal of Social Work, XL(3), 295-309.
- Anandalakshmy, S. (1980). Developmental processes. In U. Pareekh (Ed.), A survey of research in psychology 1971-76, Part 1 (pp. 168-207). Bombay, Popular.
- Anandalakshmy, S. (1982a). Cognitive competence in infancy. Unpublished manuscript, Department of Child Development, Lady Irwin College, New Delhi.
- Anandalakshmy, S. (1982b). There's a method to the measurement. In D. Sinha, R. C. Tripathi, & G. Misra (Eds.), Deprivation (pp. 37-48). N. Delhi: Concept.
- Anandalakshmy, S., & Bajaj, M. (1981). Childhood in the weavers' community in Varanasi: Socialization for adult roles. In D. Sinha (Ed.), Socialization of the Indian child (pp. 38-38). N. Delhi: Concept.
- Anantharaman, R. N. (1979a). Activity vs. disengagement for successful aging in old age. Journal of Psychological Researches, 23(2), 110-112.
- Anantharaman, R. N. (1979b). Adjustment and its correlates in old age. Indian Journal of Clinical Psychology, 6(2), 165-168.
- Anantharaman, R. N. (1979c). Perception of old age by two generations. Journal of Psychological Researches, 23(3), 198-199.

- Anantharaman, R. N. (1980a). A study of institutionalized and non-institutionalized older people. Psychological Studies, 25(1), 31-33.
- Anantharaman, R. N. (1980b). Reliability and validity of life satisfaction questionnaire. Indian Journal of Clinical Psychology, 7(1), 59-61.
- Anantharaman, R. N. (1980c). A study of self-assessment of health status among the elderly. Indian Journal of Applied Psychology, 17(1), 11-14.
- Anantharaman, R. N. (1980d). Self-concept and adjustment in old age. Journal of Psychological Researches, 24(1-2), 55-58.
- Anantharaman, R. N. (1981a). The concept of self among the elderly. Indian Journal of Applied Psychology, 18(12), 47-51.
- Anantharaman, R. N. (1981b). Physical health and adjustment in old age. Journal of Psychological Researches, 25(1), 46-50.
- Aphale, C. (1976). Growing up in an urban complex. N. Delhi: National.
- Arora, M., & Srinivasamurthy, R. (1976). Behavior therapy with children: I. General considerations. Child Psychiatry Quarterly, 9(1), 1-13.
- Asha, C. B. (1980a). Creativity and academic achievement among secondary school children. Asian Journal of Psychology & Education, 6(1), 1-4.
- Asha, C. B. (1980b). Health adjustment and creativity of the secondary school children. Psychological Studies, 25(2), 122-125.
- Babu, N., & Das, N. (In press). Effectiveness of modeling of operational rules in training conservation among children. Psychological Studies.
- Babu, N., & Mohanty, A. K. (1982). Detection of syntactic ambiguity by unilingual and bilingual tribal children. Indian Psychologist, 1(2), 25-30.
- Banerji, M., & Jain, R. (1982). Development of conservation of mass, number and volume in Indian rural and urban school children of ages 5-12 years. Psychological Studies, 27(1), 12-16.
- Barker, R. G. (1968). Ecological psychology. California: Stanford University.
- Bedi, N. (1981). Effects of malnutrition on intellectual and behavioral development through the first year of life. Unpublished master's thesis, M.S. University, Baroda.
- Behl, K., & Gash, H. (1980). Role taking skills and classification abilities in children in India. Journal of Genetic Psychology, 136(2), 265-274.

- Behre, P. B., & Srivastava, P. K. (1981). Treatment of encopresis with operant conditioning: A case report. Indian Journal of Psychiatry, 23(3), 268-269.
- Bevli, U. K. (1983). Developmental norms of Indian children 2 1/2 to 5 years. Part IV : Language Development. N. Delhi : National Council of Educational Research and Training.
- Bevli, U. K., Murlidharan, R., Malani, I., Kaul, V., & Ramachandran, C. (Eds.). (1981). Child psychology. N. Delhi: NCERT.
- Bhakoo, O. N., Kaur, S., Narang, A., & Verma, S. K. (1977). A longitudinal study of variations in Development Quotients (D.Q.s) in the first 30 months of life. Indian Journal of Clinical Psychology, 4, 59-68.
- Bhandari, A., & Ghosh, B. N. (1980). A longitudinal study on child development in relation to socio-economic factors. Indian Journal of Medical Research, 72, 677-684.
- Bharathi, V., & Ramamurthy, P. V. (1977). The influence of certain stimulus variants on the experience of Muller-Lyer illusion: A cross sectional study of children 6 to 11 years of age. Journal of Psychological Researches, 21(3), 192-195.
- Bhargava, P., & Gupta, P. (1978). Learning to be generous or stingy: Imitation of sharing as a function of generosity and vicarious reinforcement. Asian Journal of Psychology and Education, 3(1), 46-52.
- Bhargava, S. C. (1981). Participant modelling: An effective treatment strategy for stammering. Indian Journal of Psychiatry, 23(3), 259-262.
- Bhargava, S. K., Kumari, S., Choudhry, P., Ghosh, S., Bhutani, R., & Bhargava, V. (1983a). Longitudinal study of linear physical growth in pre-term infants from birth to 6 years. Indian Journal of Medical Research, 78, 74-77.
- Bhargava, S. K., Kumari, S., Choudhry, P., Ghosh, S., Bhutani, R., & Bhargava, V. (1983b). Longitudinal study of linear physical growth of infants with birth weight 1500 g or less, from birth to 6 years. Indian Journal of Medical Research, 78, 78-82.
- Bhattacharyya, A. K. (1981). Nutritional deprivation and related emotional aspects in Calcutta children. Child Abuse and Neglect, 5(4), 467-474.
- Bronfenbrenner, U. (1979). The ecology of human development. London: Harvard.

- Chanda, S. K., & Sen, A. K. (1981). An investigation of the relationship between creativity, personality, and vocational interest of twelfth grade students of a Delhi school. Our Education, 2, 31-37.
- Chatterjee, R. G. (1978). Development of the concept of time in children. Indian Educational Review, 13(2), 134-142.
- Chatterjee, B. B. (1977). Pattern of school achievement in primary grades: A critical review of the development norms of children. Indian Educational Review, 12(2), 29-67.
- Chatterjee, B. B. (1982). Methodological implications of using the socioeconomic status scale as a control variable in disadvantage-deprivation studies. In D. Sinha, R. C. Tripathi, & G. Misra (Ed.), Deprivation (pp. 73-102). N. Delhi: Concept.
- Chatterjee, P. K., & Bhattacharyya, A. K. (1979). Development of social maturity in rachitic and non-rachitic children. Child Psychiatry Quarterly, 12(4), 89-92.
- Chatterjee, P. K., & Shah, V. (1981). A study of relationship between adjustment and perceived parental behaviour among the male and female college students. Our Education, 2, 45-49.
- Chattopadhyay, P. K., & Bhattacharya, A. K. (1981a). Development of social maturity in children: role of malnutrition and SES. Child Psychiatry Quarterly, 14(2), 43-46.
- Chattopadhyay, P. K., & Bhattacharyya, A. K. (1981b). Differentiation of the component of intelligence in successive age levels (4-7 yrs): A factor analytic study. Child Psychiatry Quarterly, 14(2), 38-42.
- Chawla, P. L., Sahasi, G., Sundaram, K. R., & Mehta, M. (1981). A study of prevalence and pattern of hyperactive syndrome in primary school children. Indian Journal of Psychiatry, 23(4), 313-323.
- Chervela, N. (1981). Medical consonant cluster acquisition by Telugu children. Journal of Child Language, 8(1), 63-73.
- Chitnis, S. (1979). The education of socially disadvantaged children—an unfulfilled promise and a challenge. The Indian Journal of Social Work, 40(3), 267-281.
- Cole, M., & Scribner, S. (1974). Culture and thought. New York: Wiley.
- Cox, M. V., Bryand, D. C., & Agnihotri, R. K. (1982). A cross-cultural study of spatial ability in children. Educational Psychology, 2(1), 37-46.

- Dash, A. S., & Dash, J. (1983). Developmental levels of cognitive representation. Psychological studies, 28(1), 41-43.
- Deroas, U., & Janabandu, D. S. (1979). Adjustment in old age: An introductory survey. Indian Journal of Applied Psychology, 16(1), 44-47.
- de Souza, A. (Ed.). (1979a). Children in India. N. Delhi: Manohar.
- de Souza, A., Deshmukh, D. K., Merchant, R. M., & Shah, V. (1978). An analysis of patients attending a child guidance clinic. Child Psychiatry Quarterly, 11(2), 16-25.
- Dhammi, R., Sathyavathi, K., & Murthy, H. N. (1978). Perception of parents by modern youths. Indian Journal of Clinical Psychology, 5(2), 123-129.
- Dharmangadan, B. (1981). Creativity in relation to sex, age and locale. Psychological Studies 26, 28-33.
- Dhruvarajan, V. (1981). Level of self differentiation : caste status vs mundane experience. Dissertation Abstracts International, 42(1-A), 393.
- Dixit , R. C., & Gupta, S. (1977). Sex role preference among young children of rural and urban social groups. Psychologia : An International Journal of Psychology in the Orient, 20, 111-119.
- Dixit, R. C., & Vishnoi, P. L. (1980). Employment of mothers as a determinant of mother-daughter relationship and the development of masculinity feminity among young girls. Psychologia : An International Journal of Psychology in the Orient, 23, 167-172.
- Doss, S. H. (1980). A study of maladjustment in relation to birth order. Journal of Psychological Researches, 24, 156-159.
- Dutta, R. (1983). Socialization in an agricultural community. Unpublished Masters Thesis, M. S. University of Baroda, India.
- Fisher, V. L. (1978). Letter discrimination as a function of culture, orthography, and dimensionality of letters. Perceptual and Motor Skills, 46(2), 459-464.
- Fry, P. S., & Ghosh, R. (1980). Attributional differences in the life satisfactions of the elderly: A cross-cultural comparison of Asian and United States subjects. International Journal of Psychology, 15(3), 201-212.
- Ganguly, S. N. (1976). Communication, identity, and human development. Communications, 2(2), 221-244.

- Garg, P. K., & Parikh, I. J. (1976). Profiles in identity. Ahmedabad: Academic Book Centre.
- Ghadially, R., & Kazi, K. A. (1979). Attitudes towards sex-roles. Indian Journal of Social Work, 40(1), 65-71.
- Ghai, O. P. (1975). Effect of early marasmic malnutrition on subsequent mental development. Indian Pediatrics, 12(1), 85.
- Ghai, O. P. (1978). Physical growth and behavioural development of Indian children in Delhi. N. Delhi: Sagar.
- Ghosh, S. (1976). The feeding and care of infants and young children. N. Delhi: UNICEF.
- Ghuman, P. A. (1978). Nature of intellectual development of Punjabi children. International Journal of Psychology, 13(4), 281-294.
- Glass, G. V. (1978). Integrating findings: The meta-analysis of research. In L. Shulman (Ed.), Review of research in education (pp. 351-379). Itasca, Illinois: Peacock.
- Gokhale, S. D., & Schonh, N. K. (Eds.). (1979). Child in India. Bombay: Somaiya.
- Gomathi, S., Sitharthan, T., & Anantharaman, R. N. (1981). A study of institutionalized and non-institutionalized older people. Journal of Psychological Researches, 25(3), 125-128.
- Gore, M. (1983). Socialization of rural adolescent girls from an ecological perspective. Unpublished master's thesis, M.S. University, Baroda.
- Graves, P. L. (1978). Infant behaviour and maternal attitudes: Early sex differences in West Bengal, India. Journal of Cross Cultural Psychology, 9(1), 45-60.
- Gupta, G. R., & Ganguli, H. C. (1982). Marriage-work interaction: A study on Indian women. Indian Journal of Clinical Psychology, 9(2), 113-123.
- Gupta, M., & Gupta, P. (1980). The pattern of problems of adolescent girls in urban India. Asian Journal of Psychology & Education, 6(1), 23-31.
- Gupta, P. (1982). Altruism or reciprocity: Sharing behaviour of Hindu kindergarten children. Psychological Studies, 27(2), 68-73.
- Gupta, P., & Bhargava, P. (1977). Sharing behaviour in children as a function of model generosity and vicarious reinforcement. Psychologia: An International Journal of Psychology in the Orient, 20(4), 221-225.
- Gururaja, S. (1981). Studies in the social maturity of the Indian child. Indian Educational Review, 26(2), 119-124.

- Hasan, M. K. (1981). Prejudice in Indian youth: A sociopsychological study. N. Delhi: Classical Publishing.
- Hassan, M. K. (1977). Child rearing attitudes and some personality traits of the parents of prejudiced school children. Manas, 24(1), 1-10.
- Hassan, M. K., Enayatullah., & Khalique, A. (1977). A study of anxiety in school children as related to child-rearing attitude and some personality traits of parents. Indian Journal of Psychiatric Social Work, 6, 1-7.
- IYC in India. (1980). N. Delhi: Ministry of Social Welfare, Govt. of India.
- Iyengar, D., & Jain, U. (1979). Development of conservation in deaf and dumb children. Journal of Psychological Researches, 23(3), 135-140.
- Jachuck, K. (1982a). Level I-Level II abilities of socially disadvantaged children: A test of cumulative deficit hypothesis. Perspectives in Psychological Researches, 5(2), 1-4.
- Jachuck, K. (1982b). Pattern of cognitive abilities among boys of four sub-cultural groups. In R. Rath, H. S. Asthana, D. Sinha, & J. B. P. Sinha (Eds)., Diversity and unity in cross-cultural psychology. Netherland, Lisse: Swets & Zeitlinger.
- Jachuck, K., & Das, J. (1982). Free recall of categorized materials: A cross-cultural examination of Jensen's two-level theory. Indian Psychologist, 1(2), 51-56.
- Jain, U., & Iyenger, D. (1976). Conservation of liquid: A cross-cultural comparison. Asian Journal of Psychology & Education, 1(1), 9-12.
- Jarial, G. S. (1980). A review of studies on creativity in relation to intelligence, socio-economic status, sex, academic achievement and values in the Indian context. Indian Psychological Review, 19(3), 28-34.
- Jarial, G. S., & Sharma, A. K. (1980). Creativity and its components as effected by intelligence, personality and their interaction. Asian Journal of Psychology & Education, 6(2), 26-32.
- Jehan, Q., & Ahmed, P. (1980). Level of intelligence of advantaged and disadvantaged children. Indian Journal of Clinical Psychology, 7(2), 135-137.
- Jesudasan, V., Ambujadevi, K. R., & Bhogle, S. (1979). Determinants of motor and mental development during early childhood. Indian Journal of Social Work, 40(1), 27-40.

- Jhaj, D. S., & Grewal, J. S. (1976). A study of occupational aspirations and socio-economic status of advantaged and disadvantaged children. Indian Journal of Applied Psychology, 13(2), 70-73.
- Kakar, S. (1978). The inner world: A psycho-analytic study of child and society in India. New York: Oxford University Press.
- Kakar, S. (Ed.). (1979). Identity and adulthood. N. Delhi: Oxford University Press.
- Kale, S. V. (Ed.). (1978). Child psychology and child guidance. Bombay: Himalaya Publishing House.
- Kalra, S. K. (1981a). Differences in recall of adolescent socialization among high and low achievers in business. Journal of Applied Social Psychology, 11(6), 562-568.
- Kalra, S. K. (1981b). Family life of high achievers: A study in a business organization. The Indian Journal of Social Work, 42(3), 253-263.
- Kanekar, S., Duarte, N. T., & Kolsawalla, M. B. (1981). Perception of an aggressor and his victim in relation to age and retaliation. Human Relations, 34(1), 33-42.
- Karanth, G. K. (1981). Rural youth. N. Delhi: Concept.
- Kaur, S. (1978). Wastage of children. Delhi: Sterling.
- Khalakdina, M. (1979a). Early child care in India. Early Child Development & Care, 5(3-4), 149-360.
- Khalakdina, M. (1979b). Intervention in the life of the young child: A review. In A. de Souza (Ed.), Children in India (pp. 53-78). N. Delhi: Manohar.
- Khan, M. A. (1980). Sociological aspects of child development. N. Delhi: Concept.
- Khandekar, M. (1979a). Child welfare research in India. In S. D. Gokhale & N. K. Sohoni (Eds.), Child in India (pp. 215-247). Bombay: Somaiya.
- Khandekar, M. (1979b). Residential child care: Some conceptual and organizational issues. In A. de Souza (Ed.), Children in India (pp. 183-216). N. Delhi: Manohar.
- Kool, V. K., & Agrawal, R. (1981). The nature of semantic coding in STM. Psychological Studies, 26(2), 96-99.
- Kopp, C. B., Khoka, E. W., & Sigman, M. (1977). A comparison of sensorimotor development among infants in India and the United States. Journal of Cross Cultural Psychology, 8(4), 435-452.

- Kothari, R. (1981). Effects of nutritional status on intellectual functioning and behavioural development of infants. Unpublished master's thesis, M.S. University, Baroda.
- Kumar, U. (1979). Indian women's quest for identity. International Journal of Group Tensions, 9(1-4), 149-168.
- Kureshi, A., & Husain, A. (1982). Socio-economic status differences in patterns of aggression among school children: A projective study. British Journal of Projective Psychology and Personality Study, 27(1), 1-6.
- Lambert, W. W. (1981). Toward an integrative theory of children's aggression. Italian Journal of Psychology, 8(2), 153-164.
- Lewin, K. (1951). Field theory in social science. New York: Harper and Row.
- Majeed, A., & Ghosh, E. S. (1981). Effect of ethnicity and social class on cognitive differentiation. Journal of Psychological Researches, 25(2), 84-88.
- Malani, I., Murlidharan, R., & Bevli, U. (1978). A study of children between ages 5 1/2 - 11: Effects of environmental process variables on school achievement and cognitive development, Part I and II. N. Delhi: Child Study Unit, NCERT.
- Malaviya, D. (1977). A study of reaction to frustration. Indian Educational Review, 12(3), 71-87.
- Mallya, I. P. (1979). Special play sessions: A play-way method to help children with special needs. Child Psychiatry Quarterly, 12(1), 1-6.
- Marfatia, J. C. (1976). Emotional maladjustment in children. Child Psychiatry Quarterly, 9(2), 5-9.
- Master, R. S. (1980). A community approach to curative and preventive services. Child Psychiatry Quarterly, 13(4), 89-93.
- Mathew, A. (1977). Roles, responsibilities and privileges of parents and children in the rural and urban areas of Chittoor district in Andhra Pradesh. Journal of Comparative Family Studies, 8(1), 133-138.
- Matthews, C. M. E. (1979). Health education and the child. In A. de Souza (Ed.), Children in India (pp. 120-135). N. Delhi: Manohar.
- Mehra, B. K. (1982). Highlights on abuse in education: A view from India. Child Abuse & Neglect, 6(2), 225-228.

- Mehta, M. N. (1982). Physical abuse of abandoned children in India. Child Abuse & Neglect, 6(2), 171-175.
- Miller, B. (1980). Endangered sex. Ithaca, New York: Cornell University Press.
- Minturn, L., Boyd, D., & Kapoor, S. (1978). Increased maternal power status: Changes in socialization in a restudy of Rajput mothers of Khalapur, India. Journal of Cross-Cultural Psychology, 9(4), 483-498.
- Misra, G. (1982). Deprivation and cognitive competence. In D. Sinha, R. C. Tripathi, & G. Misra (Eds.), Deprivation (pp. 151-176). N. Delhi: Concept.
- Misra, G. (1983). Deprivation and development: A review of Indian studies. Indian Educational Review, 18, 1-21.
- Misra, G., & Shahi, B. P. (1977). Prolonged deprivation and development of form perception. Journal of Psychological Researches, 21(3), 185-191.
- Misra, G., & Shukla, A. (1979). Experiential deprivation and development of serial memory. Psychologia: An International Journal of Psychology in the Orient, 22(3), 155-163.
- Misra, G., & Tripathi, L. B. (1977). The concept of prolonged deprivation and its measurement. Indian Journal of Behaviour, 1(2), 48-60.
- Misra, G., & Tripathi, L. B. (1978). Psychological consequences of prolonged deprivation. Bhargava Research Monograph Series No. 12 Agra, National Psychological Corporation.
- Misra, R. C., & Gupta, V. (1978). Role of schooling and exposure in perceiving pictorial sequence. Psychologia: An International Journal of Psychology in the Orient, 21(4), 231-236.
- Misra, R. C., & Tiwari, B. B. (1980). Intergenerational attitudes: A psychological analysis. Psychologia: An International Journal of Psychology in the Orient, 23(3), 160-166.
- Mistry, V. R. (Ed.). (In press). Compendium of researches in early childhood education and child welfare (1957-1981) (Vol. 2). Baroda: M.S. University Press.
- Mohan, V., & Dharmani, I. (1976). The effect of intelligence and personality on verbal conditioning. Psychologica Belgica, 16(2), 223-232.
- Mohanty, A., & Stewin, L. L. (1976). Cultural variables in conservation: A model for cross-cultural research. The Alberta Journal of Educational Research, 22(4), 315-324.

- Mohanty, A. K. (1982a). Bilingualism among Kond tribals in Orissa (India): Consequences, issues, and implications. Indian Psychologist, 1(1), 34-44.
- Mohanty, A. K. (1982b). Cognitive and linguistic development of tribal children from unilingual and bilingual environments. In R. Rath, H. S. Asthana, D. Sinha, & J. B. P. Sinha (Eds.), Diversity and unity in cross-cultural psychology (pp. 78-86). Lisse, Netherlands: Swets and Zeitlinger.
- Mohanty, A. K., & Babu, N. (In press). Bilingualism and metalinguistic ability among Kond tribals in Orissa (India). The Journal of Social Psychology.
- Mohanty, A. K., & Choudhry, M. (1981). Training for conservation by self transformation and screening techniques. Psychological Studies, 26(2), 78-81.
- Mohanty, B. (1980a). Effects of socio-cultural disadvantage on intelligence and short-term memory. Indian Psychological Review, 19(4), 17-24.
- Mohanty, B. (1980b). Effects of socio-cultural deprivation on some psychological characteristics. Psychological Studies, 25(2), 113-117.
- Mohanty, N. (1982). Old age: Characteristics, problems and adjustments. Perspectives in Psychological Researches, 5(2), 16-20.
- Mohite, P. (1979). Role of a child development worker in a clinical set-up with special reference to child guidance clinic. Child Psychiatry Quarterly, 12(1), 7-12.
- Murlidharan, R. (1980). Pre-school education. In, Profile of the child in India (pp. 101-114). N. Delhi: Ministry of Social Welfare, Govt. of India.
- Nagaraja, J. (1976). The hyperactive child. Child Psychiatry Quarterly, 9(2), 1-4.
- Nagaraja, J. (1983). Sexual problems in adolescence. Child Psychiatry Quarterly, 16(1), 9-18.
- Naidu, U. (1980). Altruism in children. Bombay: Tata Institute of Social Sciences.
- Naik, C. (1978). Growing up at Kosbad hill. Kosbad (Maharashtra): Gram Bal Shikshan Kendra.

- Naik, J. P. (1980). Educational and vocational preparation of children. In, Profile of the child in India (pp. 127-144). N. Delhi: Ministry of Social Welfare, Govt. of India.
- Naik, J. P. (1983). Letting children learn: India's rough passage to universal primary education. Future, 6, 23-30.
- Natesan, H., & Devadas, R. P. (1981). Measurement of mental abilities of well nourished and malnourished children. Journal of Psychological Researches, 25(3), 121-124.
- Nayar, D. P. (1979). Child welfare concepts and non-formal programmes. In S. D. Gokhale & N. K. Sohoni (Eds.), Child in India (pp. 139-172). Bombay: Somaiya.
- Neki, J. S. (1976). An examination of cultural relativism of dependence as a dynamic of social and therapeutic relationships: I. Socio-developmental. British Journal of Medical Psychology, 49(1), 1-10.
- NIPCCD. (1979). Working mother and early childhood education. N. Delhi: Author.
- NIPCCD. (1979). Some facets of child development. N. Delhi: Author.
- Norman, D. K., Murphy, J. M., Gilligan, C., & Vasudev, J. (1981-82). Sex differences and interpersonal relationships: A cross-sectional sample in the U.S. and India. International Journal of Aging & Human Development, 14(4), 291-306.
- Nundy, S., & Singhal, S. (1981). Motivational context of educational achievement among the poor. Indian Journal of Applied Psychology, 18(1), 36-46.
- Ojha, H. (1977). Parental behavior as perceived by the authoritarian and non-authoritarian college students. Psychologia: An International Journal of Psychology in the Orient, 20(1), 49-53.
- Ojha, H., & Jha, P. K. (1979). A study of achievement motivation as a function of social class, family system and family occupation. Psychologia: An International Journal of Psychology in the Orient, 22(1), 57-63.
- Paintal, H. K. (1976). Engagement theory and successful aging. Indian Journal of Clinical Psychology, 3(2), 101-109.

- Paintal, H. K. (1978). A correlational study of the three tools for measuring successful aging. Indian Journal of Clinical Psychology, 5(1), 69-76.
- Paintal, H. K. (1979). Some factors related to successful aging in medical men. Indian Journal of Clinical Psychology, 6(1), 27-33.
- Paliwal, M. B. (1979). Decision for a third child. Indian Psychological Review, 18(1-4, Special Issue), 117-121.
- Panchamukhi, P. R. (1979). Economics of child welfare and development. In S. D. Gokhale & N. K. Sohoni (Eds.), Child in India (pp. 107-136). Bombay: Somaiya.
- Panda, K. C. (1981). Elements of child development. N. Delhi: Kalyani.
- Pandey, A. (1976). A study of the differential effect of shape and color on memory span in relation to age and sex. Darshan International, 16(1), 55-60.
- Pandey, D. N., Agnihotri, S. N., & Srivastava, A. K. (1979). Immunisation practices among children. Indian Psychological Review, 18(1-4, Special Issue), 112-116.
- Pandey, R. S. (1977). Child socialization in modernization. N. Delhi: Somaiya.
- Parameshwaran, E. G., & Bhogle, S. (Eds.). (1979). Developmental psychology. N. Delhi: Light & Life.
- Parikh, U. (1975). Development studies in Kwashiorkor. Indian Pediatrics, 12(1), 85.
- Parikh, B. (1980). Development of moral judgement and its relation to family environmental factors in Indian and American families. Child Development, 51(4), 1030-1039.
- Parke, R. D., & Asher, S. R. (1983). Social and personality development. Annual Review of Psychology, 34, 465-509.
- Parthasarthy, N. R. (1980). On some aspects of aging in India. The Indian Journal of Social Work, XL(4), 381-388.
- Pathak, N., & Rastogi, M. R. (1980). Direction and pattern of aggression and self-disclosure in low SES adolescents. Indian Psychological Review, 19(1), 14-19.
- Pereira, P., Mehta, S., Khare, B. B., Katiyar, G. P., Agarwal, D. K., Tripathi, A. M., & Agarwal, K. N. (1983). Physical growth

- characteristics in adolescent girls of upper socio-economic groups in Varanasi. Indian Journal of Medical Research, 77(6), 839-844.
- Pershad, D. (1979). Forgetting and new learning deficit in elderly subjects. Journal of Psychological Researches, 23(2), 72-75.
- Pershad, D., Gudi, S. P., & Arora, M. M. (1981). Effect of hearing aid in the development of I.Q. in deaf children. Child Psychiatry Quarterly, 14(2), 55-57.
- Pershad, D., Verma, S. K., Randhawa, A. (1979). Preliminary report on a performance test of intelligence on 4-8 year old children. Indian Journal of Clinical Psychology, 6, 125-130.
- Pershad, D., & Wig, N. N. (1977). P.G.I. Memory scale: A normative study of elderly subjects. Indian Journal of Clinical Psychology, 4(1), 6-8.
- Phatak, P. (1969). Motor and mental development of Indian babies from 1 month to 30 months. Indian Pediatrics, 6, 18-23.
- Phatak, P. (1977). A pictorial monograph of motor and mental development of Indian babies from 1 to 30 months. Baroda: Author.
- Pollitt, E. (1980). Poverty and malnutrition in Latin America: Early childhood intervention programs. New York: Praeger.
- Poole, M. E., Sunbderg, N. D., & Tyler, L. E. (1982). Adolescents' perceptions of family decision-making and autonomy in India, Australia and United States. Journal of comparative Family Studies, 13(3), 349-357.
- Profile of the child in India. (1980). N. Delhi: Ministry of Social Welfare, Govt. of India.
- Punitha, D. (1981). Socialization of aggression in children in a tribal society. In D. Sinha (Ed.), Socialization of the Indian Child (pp. 117-133). N. Delhi: Concept.
- Quarishi, Z. M., Motvani, V., & Kaura, M. C. (1981). A study of conformity and non-conformity behaviour with reference to age, sex, and education. Journal of Psychological Researches, 25(2), 67-71.
- Rai, G. C. (1979). A study of certain socio-psychological dimensions of child rearing practice adopted by Indian mothers. Psycho-Lingua, 9(1), 15-29.
- Raina, M. K., Kumar, G., & Raina, V. K. (1980). A cross-cultural study of parental perception of the ideal child. Creative Child & Adult Quarterly, 5(4), 234-241.

- Ramachandran, V. M., Menon, S., & Ramamurthy, B. (1979). Psychiatric disorders in subjects over fifty. Indian Journal of Psychiatry, 21, 193-196.
- Ramamurthy, P. V. (1976). Disparity in self: Significant other perceived role activity and its relation to adjustment among older people. Indian Journal of Applied Psychology, 13(2), 91-94.
- Ramamurthy, P. V. (1979). Psychological research of the aged in India: Problems and perspectives. In E. G. Parameshwaran & S. Bhogle (Eds.), Developmental psychology (pp. 47-52). N. Delhi: Light and Life.
- Ramamurthy, P. V. & Bharathi, V. (1979). The Ponzo and Poggendorff illusions among children 6 to 11 years. Journal of Psychological Researches, 23(2), 113-117.
- Rao, A. V. (1979). Geropsychiatry in Indian culture. Canadian Journal of Psychiatry, 24(5), 431-436.
- Rao, H. D. (1977). Income, nutrition and body size. Nutrition, 11(4), 9-20.
- Rao, H. D., & Gowrinath, S. J. (1977). Growth pattern of well-to-do Indian adolescents and young adults. Indian Journal of Medical Education, 66(6), 950-956.
- Rao, H. D., Satyanarayana, K., & Gowrinath, S. J. (1976). Growth pattern of well-to-do Hyderabad pre-school children. Indian Journal of Medical Research, 64(5), 629-638.
- Rao, I. (1976). Education of disadvantaged children: A case study of the opportunity school. Indian Educational Review, 112, 8-12.
- Rao, N. (1978). Certain sociological background variables of self esteem in high school children. Indian Educational Review, 13(3), 1-15.
- Rao, N., & Shankar, B. R. (1977). Sociological background variables of self-esteem in adolescents. Indian Journal of Behaviour, 1(2), 12-22.
- Rao, S., & Singh, S. (1981). Sex type, income level and age in relation to reaction to frustration: An Indian study. Zeitschrift Psychologie, 189, 206-213.
- Rao, S. N. (1976a). Conservation of different quantities in children of high and low ability levels. Indian Journal of Psychology, 51(4), 291-301.
- Rao, S. N. (1976b). An experimental investigation of children's concepts of mass, weight and volume. Indian Journal of Psychology, 51(3), 212-220.
- Rao, S. N. (1976c). Logical thought development in children: A study. Indian Educational Review, 11(4), 82-108.

- Rao, S. N. (1977). Concept development in children (Vol. I). Tirupathi: Sri Venkateswara University.
- Rath, R. (1973). Psycho-social problems of social change (Monograph No. 6). Bombay: Allied.
- Rath, R. (1982). Problems of integration of the disadvantaged to the main stream. In D. Sirha, R. C. Tripathi, & G. Misra (Eds.), Deprivation (pp. 239-261). N. Delhi: Concept.
- Rath, R., Dash, A. S., & Dash, U. N. (1979). Cognitive abilities and school achievement of the socially disadvantaged children in primary schools. Bombay: Allied.
- Rath, R., & Patnaik, N. (1979). Effect of training on some cognitive abilities. Journal of Psychological Researches, 23(2), 81-92.
- Rawat, M. S., & Agarwal, S. (1977). A study of creative thinking with reference to intelligence, age, sex, communities and income groups. Indian Psychological Review, 14(2), 36-40.
- Raz, S. M. (1976). The process of socialization: A multiethnic study. N. Delhi: Chetna.
- Reddy, P. R. (Ed.). (1978). Child development and family relations (Monograph Series, II). Tirupathi: Sri Venkateswara University.
- Reddy, V. R. A. (1979). Do the rich and poor differ in the level of their adjustment? Indian Psychological Review, 18(1-4, Special Issue), 58-64).
- Ricciuti, H. N. (1982). Interaction of adverse environmental and nutritional influences on mental development. Baroda Journal of Nutrition, 2, 327-335.
- Roland, A. (1980). Psychoanalytic perspectives on personality development in India. International Review of Psychoanalysis, 7, 73-87.
- Rosenzweig, S. (1976). Aggressive behaviour and the Resenzweig. Picture-Frustration (P-F) study. Journal of Clinical Psychology, 32(4), 885-891.
- Ryback, D., Sanders, A. L., Lorentz, J., & Koestenblatt, M. (1980). Child rearing practices reported by students in six cultures. Journal of Social Psychology, 110(2), 153-162.
- Sahoo, F. M. (1984). Cognitive style and interpersonal behavior. N. Delhi: Allied.

- Sahota, C. K. (1977). The ecology and educability of children: A three country study. Dissertation Abstracts International, 38(6-A), Abstract No. 3265-3266.
- Sahu, S. (1979). Effect of social disadvantage on verbal competence and language achievement. Psychological Studies, 24(1), 66-72.
- Sahu, S. (1981). Verbal competence of socially disadvantaged children. Journal of Social and Economic Studies, 2(1), 59-65.
- Sahu, S. (1982). Effect of social disadvantage on mediational abilities. In D. Sinha, R. C. Tripathi, & G. Misra (Eds.), Deprivation (pp. 139-150). N. Delhi: Concept.
- Sahu, S., & Devi, B. (1983). Role of home-environment in linguistic abilities and intelligence of advantaged and disadvantaged pre-school children. Psycholinguistics, 3(1), 25-30.
- Sahu, S., & Sahu, S. K. (1982). Cultural influences on language achievement and psycholinguistic competence. In R. Rath, H. S. Asthana, D. Sinha, & J. B. P. Sinha (Eds.), Diversity and unity in cross cultural psychology (pp. 104-109). Lisse, Netherlands: Swets and Zeitlinger.
- Saksena, N. K., Agarwal, G., & Singh, S B. (1977). Attitude of working and non-working mothers towards child rearing practices. Child Psychiatry Quarterly, 10(3), 1-5.
- Sandeep, P., & Pushpa, M. (1981). Deprivation and cognitive development in children. Child Psychiatry Quarterly, 14(2), 47-54.
- Saraswathi, T. S. (1976). Changes in immediate memory span: A longitudinal study of children from 3-5 yrs. Indian Educational Review, 11(2), 65-69.
- Saraswathi, T. S. (1977). Production and mediation deficiency in children's free recall: A brief report. Indian Educational Review, 12(4), 61-67.
- Saraswathi, T. S. (1981). Techniques for the study of socialization: The need for a broad perspective. In D. Sinha (Ed.), Socialization of the Indian child (pp. 153-166). N. Delhi: Concept.
- Saraswathi, T. S. (Ed.), (1982). Human development, marriage and family relations (Vol. 1), (Compendium of researches 1963-1982, Department of Child Development). Baroda: M.S. University Press.
- Saraswathi, T. S., & Dutta, R. (1984). Socialization of children and adolescent girls among the urban and rural poor: An ecological

- perspective. Unpublished manuscript, Child Development Department, M.S. University, Baroda.
- Saraswathi, T. S., Saxena, K., & Sundaresan, J. (1977). Development of moral judgement in Indian children between ages 8-12 yrs. In Y. H. Poortinga (Ed.), Basic problems in cross cultural psychology. Amsterdam: Swets and Zeitlinger.
- Saraswathi, T. S., & Sundaresan, J. (1979). A short-term longitudinal study of development of moral judgement in Indian boys 10-13 years of age. 5th Biennial Congress of the International Society for Studies in Behavioral Development. Lund, Sweden.
- Saraswathi, T. S., & Sundaresan, J. (1980). Perceived maternal disciplinary practices and their relation to development of moral judgement. International Journal of Behavioural Development, 3(1), 91-109.
- Saraswathi, T. S., Sundaresan, J., & Saxena, K. (1980). Age, sex and social class differences in the development of moral judgement in Indian children between 10-15 yrs. In J. Antony (Ed.), The child in the family (Vol. 6). New York: John Wiley.
- Saraswathi, T. S., Takkar, D., & Kaur, I. (1979). Perceived maternal disciplinary practices and their relation to development of moral judgement in Indian children ages 10-12 years. In L. H. Eckensberger, Y. Poortinga, & W. J. Lonner (Eds.), Cross-cultural contributions to psychology. Lisse, Holland: Swets and Zeitlinger.
- Saraswathi, T. S., & Verma, (1976). Social class differences in the development of moral judgement in girls of ages 10-12 years. Indian Journal of Psychology, 51(4), 325-332.
- Sasi, P. T., & Sanandaraaj, H. S. (1982). Old people living in home for the aged: A study of certain variables of adjustment. Psychological Studies, 27(2), 77-80.
- Satyavathi, K. S., Agarwal, K. N., & Agarwal, D. K. (1981). The growth pattern of waist, pelvic and hip measurements during adolescence. Indian Journal of Medical Research, 74, 56-62.
- Satyavathi, K., Agarwal, K. N., Khare, B. B., & Agarwal, D. K. (1981). The growth pattern of weight and height during adolescence. Indian Journal of Medical Research, 74, 857-865.

- Sears, R. R. (1975). Your ancients revisited: A history of child development. In E. M. Hetherington (Ed.), Review of child development research (Vol. 5). Chicago: The University of Chicago Press.
- Serpell, R. (1982). Measures of perception, skills and intelligence. The growth of a new perspective on children in a third world country. In W. W. Hartup (Ed.), Review of child development research (Vol. 6). Chicago: University of Chicago Press.
- Seth, M., & Saksena, N. K. (1978). Attitudes of literate and illiterate mothers toward child-rearing. Child Psychiatry Quarterly, 11(3), 49-54.
- Seth, M., Saksena, N. K., & Srivastava, R. K. (1978). Child rearing attitudes of rural and urban mothers: A comparative study. Child Psychiatry Quarterly, 11(2), 26-30.
- Seymour, S. (1976). Caste/class and child rearing in a changing Indian town. American Ethnologist, 3(4), 783-796.
- Sharma, A., & Anandalakshmy, S. (1981). Prejudice in the making: Understanding the role of socialization. In D. Sinha (Ed.), Socialization of the Indian child (pp. 101-116). N. Delhi: Concept.
- Sharma, N. (1981). Some aspects of attitude and behaviour of mothers. Indian Psychological Review, 20(1), 35-42.
- Sharma, P., Saraswathi, T. S., & Gir, S. (1980). Development of social competence: School's obligation to children and adolescents. Quest in Education, 17(3), 217-227.
- Sharma, P., Saraswathi, T. S., & Gir, S. (1981). Role of parents and teachers in promoting social competence in children. Child Psychiatry Quarterly, 14(4), 134-137.
- Sharma, R. (1979). Malnutrition and mental development: A longitudinal study. Unpublished master's thesis, M.S. University, Baroda.
- Sharma, S. P. (1976). Conservation of liquid, solid and number: A cross cultural study of Indian and British children. Indian Educational Review, 11(4), 48-56.
- Sharma, T. R., & Sharma, M. (1977). Frustration reactions of seventh grade children. Indian Educational Review, 12(1), 30-37.
- Shivarathamma, N. (1979). Treatment report of an artistic child: Monozygotic twin concordant to autism. Indian Journal of Clinical Psychology, 6(2), 95-100.

- Siddamma, T. (1979). Obesity and socio-economic status among children. Child Psychiatry Quarterly, 12(4), 83-88.
- Silvan, M. (1981). Reply to Alan Roland's paper on "Psychoanalytic perspectives on personality development in India." International Review of Psycho-Analysis, 8(1), 93-99.
- Singh, A., & Sharma, S. (1978). Disrupted father-son relationship and its relation to delinquent behaviour. Asian Journal of Psychology & Education, 3(1), 16-20.
- Singh, A. K. (1981a). Development of religious identity and prejudice in Indian children. In D. Sinha (Ed.), Socialization of the Indian child (pp. 87-100). N. Delhi: Concept.
- Singh, A. K. (1981b). Impact of comics reading on perceptual skills. Psychological Studies, 26(2), 86-87.
- Singh, A. M., & de Souza, A. (1980). The urban poor. N. Delhi: Manohar.
- Singh, J. G., Singh, S., & Goburdhum, M. (1982). A comparative study of the problems of Indian and foreign students. Indian Journal of Clinical Psychology, 9(2), 217-221.
- Singh, L. B., & Fatmi, R. B. (1980). A relationship between social responsibility and parental discipline. Asian Journal of Psychology & Education, 6(3), 9-11.
- Singh, M. V., & Dagar, B. (1982). Sociological aspects of behavioural problems in a community child guidance centre. Child Psychiatry Quarterly, 15(2), 43-49.
- Singh, R. P. (1977). Education for creativity. Indian Psychological Review, 14(2), 67-68.
- Singh, R. P. (1978). Divergent thinking abilities and creative personality dimensions of bright adolescent boys and girls. Indian Educational Review, 13(4), 82-91.
- Singh, R. P. (1981a). A study of creativity as function of adjustment, frustration and level of aspiration. Indian Psychological Review, 20(4), 39-42.
- Singh, R. P. (1981b). Creativity in relation to adjustment. Psychological Studies, 26(2), 84-85.
- Singh, R. S. (1981). Study of certain moral functions in relation to some demographic factors. Indian Psychological Review, 20(3), 7-12.

- Singh, S. (1981). Fear of failure among females as related to personality, locus of control, behaviour problems and child rearing practices. Personality Study & Group Behaviour, 1(2), 96-106.
- Singh, S., Bhandari, A., & Varvaria, K. (1981). Factor structure of correlates of graphic expression measure of n-achievement among rural children. Asian Journal of Psychology & Education, 7(2), 55-59.
- Singh, S., & Varvaria, K. (1977). Correlates of fantasy-based motive to avoid success in Indian women. British Journal of Projective Psychology & Personality Study, 22(2), 7-13.
- Singh, U. P., & Sowaid, M. (1976). The role of parental discipline in hostility, guilt, and conflict over hostility. Psychologia: An International Journal of Psychology in the Orient, 19(1), 29-34.
- Singh, Y., Bhargava, M., & Kumar, K. (1981). The value of children. Indian Psychological Review, 20(4), 47-54.
- Singhal, S. (1980). Home and school context of friendship expectation development in school children in India. Psychologia: An International Journal of Psychology in the Orient, 23(2), 105-115.
- Sinha, A. K. (1978). Educating the disadvantaged child. Journal of Psychological Researches, 22(2), 65-71.
- Sinha, D. (1977a). Ambiguity of role-models and values among Indian youth. Indian Journal of Social Work, 38(3), 241-247.
- Sinha, D. (1977b). Orientation and attitude of the social psychologist in a developing country: The Indian case. International Review of Applied Psychology, 26(1), 1-10.
- Sinha, D. (1977c). Some social disadvantages and development of some perceptual skills. Indian Journal of Psychology, 52(2), 115-132.
- Sinha, D. (1979). Cognitive and psychomotor skills in India. Journal of Cross-Cultural Psychology, 10(3), 324-355.
- Sinha, D. (Ed.). (1981). Socialization of the Indian child. N. Delhi: Concept.
- Sinha, D. (1982a). Socio-cultural factors and the development of perceptual and cognitive skills. In W. W. Hartup (Ed.), Review of child development research (Vol. 6). Chicago: University of Chicago Press.
- Sinha, D. (1982b). Towards an ecological framework of deprivation. In D. Sinha, R. C. Tripathi, & G. Misra (Eds.), Deprivation (pp. 25-36). N. Delhi: Concept.

- Sinha, D., Tripathi, R. C., & Misra, G. (1982). Deprivation. N. Delhi: Concept.
- Schoni, N. K. (1976). Role of adoption and foster care in child rehabilitation. Indian Journal of Social Work, 37(2), 121-133.
- Somasundaram, O., & Papakumari, M. (1981). A study of Down's anomaly. Child Psychiatry Quarterly, 14(3), 85-94.
- Southworth, F. C. (1980). Indian bilingualism: Some educational and linguistic implications. Annals of the New York Academic of Sciences, 345, 121-146.
- Srinivasan, K., Saxena, P. C., & Kanitkar, T. (Eds.). (1979). Demographic and socio-economic aspects of the child in India. Bombay: Himalaya.
- Srivastava, A. K. (1977). Social-class interaction in the language effectiveness of bright secondary school students. Psychologia: An International Journal of Psychology in the Orient, 20(4), 226-233.
- Srivastava, N., & Gupta, P. (1981). Sex differences on measures of altruism. Psychological Studies, 26(2), 92-95.
- Srivastava, R. (1976). Slow and fast learners in reversal shift and different amount of training trials. Asian Journal of Psychology and Education, 1(3), 11-14.
- Srivastava, R. (1977a). Age and training trial variables in reversal and non-reversal shifts. Journal of Psychological Researches, 21(1), 61-66.
- Srivastava, R. (1977b). Cultural differences in moral judgement. Indian Journal of Behaviour, 1(3), 24-25.
- Stork, H. (1980). La naissance d'un fils dans la tradition religieuse de l'Inde (The birth of a son in the religious traditions of India). Journal de Psychologie Normale et Pathologique, 77(2-3), 151-186.
- Sudha, B. G. (1979). Problems of school going girls. Indian Psychological Review, 18(1-4, Special Issue), 35-41.
- Sultana, M., Siddiqui, A. Q., & Siddiqui, A. (1981). Personality adjustment among rural and urban students. Indian Journal of Clinical Psychology, 8(1), 57-58.
- Tara, S. N. (1981). Sex differences in creativity among early adolescents in India. Perceptual & Motor Skills, 52(3), 959-962.
- Tawari, A. N., & Misra, G. (1977). A study of achievement motive in relation to prolonged deprivation. Psychologia: An International Journal of Psychology in the Orient, 20(3), 172-179.

- Thakur, G. P., Shahi, S. P., & Kumar, A. (1981). Social memory task in relation to sex, age, & rural-urban background. Psychological Reports, 149(3), 948.
- Triandis, H. C., & Berry, J. W. (Eds.). (1980). Handbook of cross cultural psychology (Vol. 2). Boston: Allyn and Bacon.
- Tripathi, D. K., & Misra, G. (1979). Development of moral judgement in Indian children. Psychologia: An International Journal of Psychology in the Orient, 22(3), 164-169.
- Tripathi, L. B. (1982). Some methodological problems of deprivation studies. In D. Sinha, R. C. Tripathi, & G. Misra (Eds.), Deprivation (pp. 49-72). N. Delhi: Concept.
- Varvaria, K., Agrawal, R., & Singh, S. (1981). Some characteristics of fantasy based measure of fear of success among males and females. Indian Journal of Clinical Psychology, 8(2), 95-100.
- Varma, M. (1976). Moral development in children. Allahabad: Chugh Publications.
- Varma, M. (1979). Socio-economical factors and development of aggression in children. Social Change, 9(4), 13-17.
- Varma, M. (1981). Approaches and techniques for the study of socialization. In D. Sinha (Ed.), Socialization of the Indian child (pp. 137-152). N. Delhi: Concept.
- Vasudeva, P. (1976). Social change. N. Delhi: Sterling.
- Venkataramaiah, S. R., & Barathi, K. K. (1977). Socio-psychological analysis of children's quarrels: The empirical investigation--results and discussion. Child Psychiatry Quarterly, 10, 1-7.
- Verma, A. (1979). Child development and child welfare: Research and social policy. The Indian Journal of Social Work, 40(3), 255-266.
- Verma, A., & Agnihotri, C. (1981). In favour of children. Baroda: Good Companions.
- Verma, A., & Saraswathi, T. S. (1980). Towards an integrated approach to research in early childhood education: Our experiences in the seventies. Indo-US Seminar on Effects of Deprivation in Early Childhood on Learning. New Delhi: India.
- Verma, L. K. (1981). Humor differences among creative and noncreative high school students from various academic streams. Indian Psychological Review, 20(2), 1-6.

- Verma, L., & Sinha, M. M. (1977). Effect on SES on perceptual differentiation contingent upon induced frustration in children. Indian Psychological Review, 15(1), 27-35.
- Verma, S. K., Pershad, D., & Menon, R. (1979). Cross-validation of Developmental Screening Test (DST). Indian Journal of Clinical Psychology, 6(1), 17-20.
- Verma, S. K., Pershad, D., & Randhava, A. (1980). Are Indian children slow? Report of an enquiry with a speed measure of intelligence. Child Psychiatry Quarterly, 13(3), 67-71.
- Vijayalakshmi, J. (1980). Academic achievement and socio-economic status as predictors of creative talent. Journal of Psychological Researches, 24(1-2), 43-47.
- Visweswara, K., Devi, V. S., Reddy, P. J., & Narayanan, T. P. (1978). Relative importance of factors affecting body-weight in preschool children as a result of nutritional status. Indian Journal of Medical Research, 68, 756-768.
- Vlassoff, M. (1978). Economic motives and fertility in an Indian village. Unpublished doctoral dissertation, University of Poona.
- Wig, M. N., Mehta, S., & Verma, S. K. (1981). Methodological shortcomings of previous studies of malnutrition and mental development. Asian Journal of Psychology & Education, 8, 25-36.
- Williams, J. E., Best, D. L., Hague, A., Pandey, J., & Verma, R. K. (1982). Sex trait stereotypes in India and Pakistan. Journal of Psychology, 111(2), 167-181.